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GRAND AMBITION

Marantz wows with its
$10k wireless speaker

HIGH END MUNICH

Luxury launches from the
world's largest hi-fi show

PINK FLOYD AT POMPEII
IDOL

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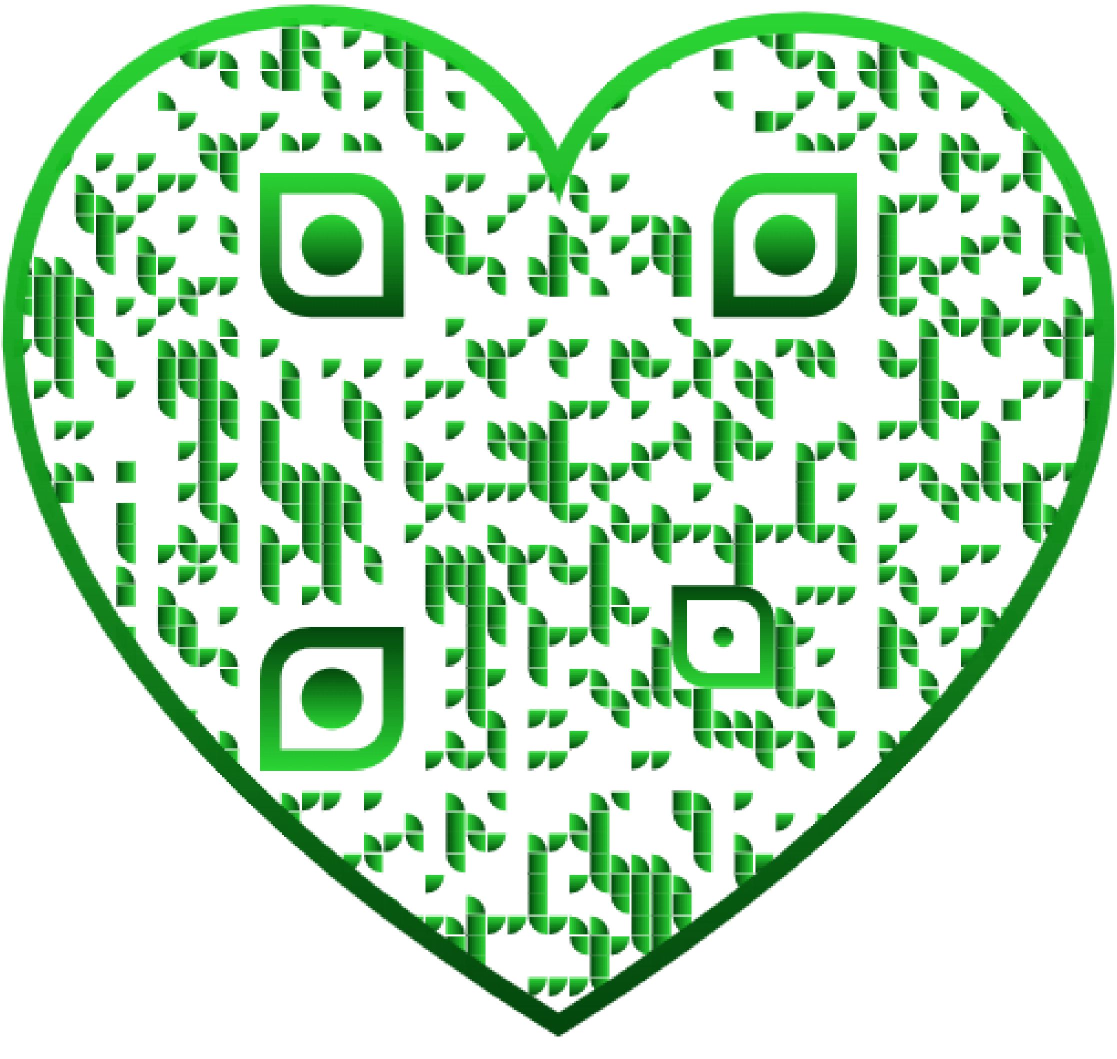

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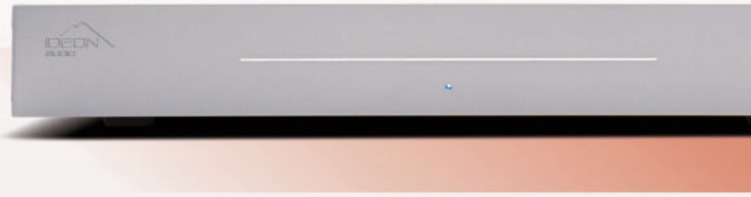
The Σigma Wave focuses on isolating USB signals to eliminate ground loop noise and timing errors. It features full USB signal isolation, including data, power, and ground lines, and incorporates a femto clock for re-timing. This results in a cleaner, distortion-free analog signal, enhancing the overall listening experience.



IDEON
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Alpha Wave
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IDEON audio

TOGETHER,

these devices form a complementary system that optimizes both network-to-USB and USB-to-analog signal paths, delivering superior audio performance.

Editor's lead in

It's a sign of the times: Harman International has entered a definitive agreement to acquire Masimo's consumer audio division by the end of the year. The agreed $350m cash sale will see the Samsung Electronics-owned company take in legendary hi-fi brands Bowers & Wilkins, Denon and Marantz, as well as Polk Audio, Definitive Technology, Classé, HEOS and Boston Acoustics, massively expanding its significant AV catalogue, which already includes brands such as Arcam, AKG, JBL, Mark Levinson and Revel.

Samsung says it plans to add Masimo's brands to strengthen its global leading position in the consumer audio market, which is expected to grow from $60.8bn this year to $70bn by 2029. "This acquisition represents a strategic step forward in the expansion of Harman's core audio business and footprint across key product categories such as Home Audio, Headphones, Hi-fi components, and Car Audio," says Dave Rogers, President of Harman's Lifestyle division. "Built on a shared legacy of innovation and excellence in audio technology, this combined family of brands, together with the talented employees of both companies, will deliver complementary audio products, strengthen our value proposition and offer more choices to consumers."

Only three years ago, US medical company Masimo acquired those eight audio brands from high-end audio business Sound United for a hefty $1.025bn, although for over a year the writing has been on the wall that it was looking to sell them on.

Sound United only acquired Bowers & Wilkins in 2020, too, so you could say the British speaker brand has been around the houses in the past five years — not that its product quality appears to have suffered in that time, with its speakers and headphones arguably stronger than ever on the performance/value front.

So what does this sale mean for customers? Right now, presumably not much, but while I have read plenty of negative knee-jerk reactions on various forums ("Samsung is a dominating powerhouse"; "some brands will go down the toilet"), I believe it will be a positive move in the long run.

Ultimately, despite its Samsung ownership, Harman is a massive global company in its own right and still operates as a distinct entity focused specifically on established AV brands. It has a proven, 70-odd-year history of producing hi-fi and headphone products across various categories across the budget spectrum and, unlike Masimo, has the resources, knowledge and consumer focus in the audio industry.

Sure, the acquisition could spell bad news for some of the Masimo brands. Harman is a business based on fiscal concerns, after all, and cutthroat decisions have been made before during previous acquisitions. We all saw what happened to AKG, and Lexicon has been very quiet in recent years. To a lesser extent, you could say the same about Mark Levinson.

That said, Harman has by and large kept the unique character and 'soul' of many of the larger audio brands it owns and, for whatever reason, cares about. Arcam is one example: having been in the Harman stable since 2017, it has maintained its focus on delivering key hi-fi and home cinema equipment for real-world money, and recently refreshed its rebranding for a new line of (very good) hi-fi electronics. JBL is thriving too. I just can't see the biggest heritage and arguably flagship Masimo brands, Bowers & Wilkins and Marantz, or Polk for that matter, doing poorly under Harman. They will fill a useful gap in Harman's audio portfolio — mass-market and high-end speakers and AV receivers. Harman's growing interest in car audio systems aligns with some of the Masimo brands' recent ventures, too.

The acquisition does pose questions: will Bowers still produce the audio hardware and tuning for select Philips TVs? Will Denon's HEOS streaming platform find its way into Samsung TVs and more hi-fi streaming equipment? And ultimately, which brands will survive? We probably won't get any answers until late this year or early next. What we can be pretty sure of now is that, whatever happens, the acquisition will probably change the audio landscape in a significant way.

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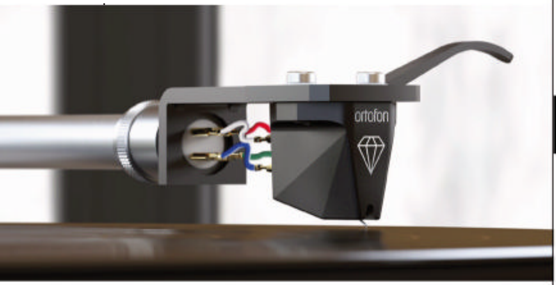

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IDOL
DREAM INTO IT

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OUR FRONT COVER

The superior subject of this issue's High End Review sits centre stage in all of its sleek, modern, 'Warm Silver' glory. Highlights from the High End Munich show are beautifully cover-worthy, too.

Cover image: Tom Cruise in Top Gun: Maverick, courtesy Paramount Pictures

Market mainstays

Beyerdynamic's DT 770 Pro X Limited Edition over-ears are now official members of the German brand's wired headphones family. Originally released last year as part of Beyerdynamic's 100-year anniversary celebrations, the DT 770 Pro X Limited Edition were, as their name implies, only available in restricted numbers.

The model has now shed its 'Limited Edition' suffix and become a fully fledged member of the Beyerdynamic lineup due to, the brand says, "high demand".

"We were blown away by the reception to the DT 770 PRO X Limited Edition," says the company's CEO, Andreas Rapp. "It was clear from the start that this headphone had staying power. By officially adding it to our product lineup, we are meeting the needs of a new generation of studio professionals who demand both pristine quality and modern functionality."

Not much else is set to change alongside the shortened name. The DT 770 Pro X will continue to employ the same dynamic Stellar.45 driver system as found in the established DT 700 Pro X, aiming to deliver "high-resolution sound reproduction" for home and studio use.

As before, the DT 770 Pro X come equipped with velour earpads alongside a 3m Mini-XLR-to-3.5mm jack cable and a 6.3mm adapter, but naturally the 'Limited Edition' logo on the headphones' yoke will be gone.

I'm glad to see the pricing hasn't changed: the Beyerdynamic DT 770 Pro X cost a pretty reasonable $349.

For more information, contact Synchronised Technology on 1300 467 968 or visit www.syntec.com.au

beyerdynamic
DT 770 PRO

SEL
VOL
audiolab
D7
audiolab

A legend reborn

The original Audiolab M-DAC, which launched back in 2011, remains fondly remembered by me and my colleagues, having been a staple on our office desks for years, passed around the team to whoever 'needed' it most that day. The M-DAC+ that followed in 2016 also shared its predecessor's success. Now, Audiolab has launched two new models that are direct descendants of the original M-DAC: meet the D7 and D9.

The next generation of Audiolab's standalone DACs build upon the same blueprint as the M-DAC, but have been honed over several years and iterations of technical development.

The Audiolab D7 is the cheaper (and smaller) of the two models, at $1,100, and combines a DAC, preamplifier and headphone amplifier.

It is built around the ES9038Q2M — the same 32-bit Sabre DAC chip also found in Audiolab's 7000A and 6000A MkII integrated stereo amps. Audiolab has actually used ESS Technology's chips since the original M-DAC and claims to have more experience in implementing these tricky-to-incorporate components than any other manufacturer. Audiolab also claims that its proprietary circuitry makes the most of ESS Technology's Hyper-Stream II architecture and Time Domain Jitter Eliminator, resulting in ultra-low noise and high dynamic range. Audiolab also uses its own clock and power supply circuitry, alongside a Class A post-DAC active filter.

In terms of hi-res audio, the D7 can handle PCM files up to 32-bit/768kHz and DSD512 over USB. It's compatible with MQA and certified as Roon Tested, too. You can connect PCs, Macs and other devices using the USB Type B port, and USB drives using the USB Type A socket. You also get two opticals and coaxials apiece, plus Bluetooth aptX HD.

Outputs include both analogue (balanced XLR and single-ended RCA) and digital (optical and coaxial), and a 6.35mm socket accommodates your wired headphones. The D7 should fit seamlessly into your setup thanks to the option of fixed or variable modes with the analogue outputs. The fixed mode connects to integrated amplifiers and preamps with those partner devices controlling the volume, while the variable mode uses the D7's volume control through a power amp or powered speakers.

You can upsample digital audio data to 352.8kHz or 384kHz, while five DAC reconstruction filter settings allow you to adjust the sound to suit the source material. Given the downright iffy quality of some digital audio files, that could be a very useful feature.

The D9 ($2,500), meanwhile, has a lot in common with Audiolab's flagship 9000 Series hi-fi components. It's very similar in design to the company's 9000N music streamer actually, but with LDAC-supporting Bluetooth in place of network streaming functionality.

It is powered by ESS Technology's high-end ES9038PRO chip this time, which incorporates eight channels (up from the D7's two). Audiolab claims this further eliminates noise and distortion, and combined with its proprietary circuitry, master clock and Class A post-DAC filter, delivers "remarkable sonic clarity and breathtaking dynamics".

Its circuitry is supposedly "significantly elevated" over its sibling's, with its post-DAC analogue section including top-grade components and differential balanced architecture for a purer signal. There is also an ultra-low-noise toroidal transformer for consistent, clean power.

Audiolab has used its extensive experience with ESS's chips to employ multiple discrete ultra-low-noise regulators to provide power separately to the left and right channels for each stage of the digital-to-analogue conversion process.

It boasts the same hi-res chops and headphone amplifier stage as the D7, as well as the same connections, adding an additional AES3/EBU input.

For more information, contact AV Revolution on (02) 9521 4844 or visit www.avrevolution.com.au

The Hi-Fi Headlines

NEW ARRIVALS AT LEN WALLIS AUDIO

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NEWSLETTER NO.273

Kaleidescape Is Back!

The Ultimate Movie Platform for Your Home Theatre

Kaleidescape returns to Australia after years away, bringing the ultimate movie platform to elevate your home theatre experience.

While streaming services abound, none **match Kaleidescape's performance—especially in high-end setups.**

For home theatres costing tens or even hundreds of thousands, relying on compressed content from Apple TV or Netflix simply won't do justice to systems like a JBL Synthesis with a quality projector.

Kaleidescape delivers movies in lossless audio formats like Dolby Atmos and DTS:X, with bitrates up to 10 times higher than typical streamers, ensuring a breathtaking soundtrack. Its video bitrate also far surpasses competitors, making a noticeable difference on any premium projector. Experience movies as they were meant to be seen and heard—visit us to see Kaleidescape in action.

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McIntosh – Expanding Our Showroom Lineup

The range of McIntosh products in our showroom continues to grow with the addition of the MA12000 integrated amplifier and MCD12000 DAC/SACD player, joining the acclaimed C12000 pre-amplifier.

The MCD12000 is a reference-quality DAC with a high-performance SACD/CD player built in. As the CD format enjoys a revival, this unit sets the standard, blending valve **and solid-state technology for stunning audio clarity.**

Priced at $27,995, it's a must-have for audiophiles seeking the best in digital playback.

The MA12000, a hybrid valve/solid-state design, delivers 350 watts per channel and weighs a hefty 64kg.

Capable of driving even the most demanding loudspeakers, it offers unmatched versatility with 10 analogue inputs (including Moving Magnet and Moving Coil phono stages) and 7 digital inputs.

Its commanding presence ensures every note is delivered with precision and power.

Big Savings on Aurender – But Be Quick!

Promotion Ends June 30, 2025

Aurender, a leading name in high-quality audio streamers, has launched an EOFY promotion on three exceptional models.

These savings won't last long—act before June 30, 2025, to take advantage of these deals:

J.S.Bach
BWV 1004-Chaconne

Aurender N150: Now $3,995 (was $5,995) – Exceptional value for a high-quality streamer that won't break the bank.

Aurender A200: Now $9,995 (was $11,995) – A versatile choice for audiophiles seeking premium **performance.**

Aurender N200: Now $9,995 (was $11,995) – Perfect for those wanting **top-tier streaming at a reduced price.**

Don't miss out on these substantial **savings—upgrade your streaming setup with Aurender's renowned quality today!**

Why Upgrade Now?

Elevate your system with McIntosh's commanding MA12000 and versatile MCD12000, perfect for audiophiles craving power and precision. The Rega Planar 3 RS offers incredible value for **vinyl lovers, while Musical Fidelity's** Nu-Vista DAC sets a new benchmark **in digital audio. Visit Len Wallis Audio to hear these products and discover** why we've been trusted since 1978. **Don't miss out—upgrade your listening experience today!**

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Added X factor

Don't be confused by the name: dCS's Lina DAC X is a fully fledged music streamer. The British brand's new $24,000 release arrives to round out its established Lina line, expanding on the versatility offered by the existing Lina DAC (also a music streamer, priced $22,000) by packaging more flexible features inside a revamped, full-width design.

The Lina DAC X is built on the same technological foundation as the original half-width model but adds a rotary volume control, a new remote control and the option to connect CD/SACD transports.

Like its stablemate, the Lina DAC X is capable of handling PCM files up to 24-bit/384kHz alongside DSD128. Sonically, dCS promises "exceptional clarity and detail retrieval" from its latest streamer, teasing "a natural and deeply musical sound" aided by its acclaimed Ring DAC system and unique digital processing platform.

There's support for streaming services such as Tidal, Qobuz and Spotify, as well as music management software from Roon and Audirvana. AirPlay 2, Internet radio and UPnP streaming are also on the menu, meaning it will work with compatible NAS devices, laptops and hard drives on the same network. Sadly, however, Bluetooth or Chromecast are not onboard.

The streamer offers balanced XLR and unbalanced RCA outputs alongside coaxial, optical and USB (both Type B and Type A) inputs. You can therefore connect a TV, or hook up a CD transport to get your shiny discs spinning again.

The Lina DAC X is housed within a machined aluminium chassis designed to enhance performance by minimising unwanted distortion. It measures 44cm across compared to the compact Lina DAC's 22cm, so the half-width Master Clock and Headphone Amplifier in the Lina range can neatly sit together atop the Lina DAC X's chassis if you wish to combine the series' talents.

The new music streamer has also been designed to be consistently upgradable thanks to its flexible built-in architecture, allowing for further upgrades and features to be added later down the line.

For more information, contact Advance Audio on (02) 9561 0799 or visit www.advanceaudio.com.au

Pure Audio
pureaudio

World's first 'lossless and immersive' streaming service

While the lossless streaming of hi-res stereo music has been an accessible reality for some years now, thanks to services such as Tidal, Qobuz and Apple Music pushing the quality at competitive prices, the same hasn't been possible for multi-channel audio. Some existing services support 'three-dimensional' listening experiences via their support of the Dolby Atmos format and spatial audio technology, of course, but such music is delivered compressed and lossily — it isn't lossless; not even close.

Pure Audio Streaming is an upcoming streaming service looking to change that, promising to deliver 'lossless, uncompressed and uncompromised immersive audio to both mobile devices and home theatre systems'. It will offer two subscriptions — a 'Stereo' plan offering hi-res stereo (up to 192kHz PCM) and binaural audio (PCM 48kHz via Auro technology), and an 'Immersive' tier offering surround sound via PCM 5.1 and 7.1.4 96kHz PCM (via Auro-3D technology).

To experience the unique latter, you will need an HDMI input and monitor for Nvidia Shield Pro, an AV receiver and speaker package that supports at least 5.1 channels (but preferably 7.1.4 channels and the Auro-3D format!), plus a 'fast and reliable' wi-fi or Ethernet network connection.

Devices that can connect to the AV receiver via HDMI and stream the immersive tracks include the Amazon Fire Stick 4K (2023), Amazon Fire Cube (support 'coming soon') and a Mac (2021 or newer) or Windows computer running the Google Chrome browser.

This marks the first time that hi-res surround or binaural Auro-3D material will be streamable from a service, with the company noting that 'over 300' recordings, including the Grammy-winning LUX by 2L Records, will be available.

So yes, it's clear that Pure Audio Streaming is being pitched at the more discerning audio enthusiasts before you even get to its price. Its subscription cost is being kept under wraps at the time of writing — the service launches on 25th July.

However, the cost of entry to the 'Early Adopter Program', available to sign up for now, suggests it won't be cheap. Those wishing to try Pure Audio Streaming prior to its official public launch can register to receive a full year of access to the service for US$300, or US$500 if you want an Nvidia Shield Pro chucked in too.

Luxman joins the centurion club

There aren't many hi-fi brands in the world that can celebrate 100 years in the business, but Japanese brand Luxman can now join the likes of Bang & Olufsen, Philips and (next year) Tannoy in achieving this milestone. It is kicking off the party by launching two new hi-fi products and a special edition package.

First up is the P-100 Centennial ($17,999), the brand's "finest-ever" headphone amplifier. It boasts fully balanced circuitry with four discrete amplifiers that can drive a variety of headphones, and is largely based on an evolved version of Luxman's long-running ODNF (Only Distortion Negative Feedback) amplifier technology, called LIFES. It features a completely reimagined circuit design and new high-quality components — Luxman claims this allows for a higher signal-to-noise ratio and the distortion at the output to be reduced by more than half, resulting in a quieter amplifier and cleaner sound.

The P-100 accommodates it all on the outputs front, with a standard 6.3mm connector joined by balanced 4-pin XLR, 4.4mm Pentaconn and even a 3-pin XLR connector when using two P-100s in parallel bridged balanced mode.

An improved volume control attenuator allows for finer adjustments and sits alongside a left/right balance control, a sensitivity selector (low, medium and high), and a six-level volume limiter function to protect your headphones and hearing.

Next up is the E-07 phono preamplifier ($9,999), which replaces the EQ-500 released back in 2016. It too features "carefully selected components prioritised for supreme audio quality", some of which have been custom-developed after extensive listening tests by the Luxman team.

The E-07 promises a high signal-to-noise ratio, with a low-noise circuit design and an aluminium chassis that isolates the noisy power supply from the amplifier sections. That chassis features all manner of toggles and rotary switches and its rigidity is reinforced with thick copper plates and cast iron insulator feet.

The phono preamp has a newly developed step-up transformer for MC cartridges, too, supporting balanced inputs and improving channel separation. One pair of balanced XLR and two pairs of RCA inputs are included.

To fine-tune the E-07 to a particular cartridge, it offers load impedance adjustments for both MC and MM designs, as well as a load capacitance selector. Extra features include a mono mode when playing mono records, a phase inversion switch for the balanced outputs, an articulator function that "defeats magnetization of the cartridge and MC transformer", and a low-cut switch that helps reduce the unwanted low-frequency effects of warped records.

Finally, there is a limited Centennial Black Edition finish for four of Luxman's most esteemed current products: the L-509Z integrated amplifier, D-07X CD/SACD player, NT-07 network transport and PD-151 MkII turntable. Only 100 units of these special all-black products will be made and they can only be purchased as a four-piece system.

For information on Australian availability, contact Audio Active on (03) 9699 8900 or visit www.audioactive.com

Another nail in the coffin for physical media

Pioneer is bidding farewell to the optical disc market, having been one of the last remaining big Japanese companies to make optical drives after more than 30 years as a leader in CD, DVD and Blu-ray technology.

The last 4K Blu-ray players the company produced were the UDP-LX500 and UDP-LX800 in 2019, but since then it has been radio silence, and the chances of a successor being produced by the brand were admittedly slim.

This latest announcement is more about the brand's computer disc drives, which it has continued to produce since pulling out of the Blu-ray player market. Sales of Pioneer's optical products are reportedly scheduled to close at the end of this month, and production of Blu-ray drives has already come to an end.

Indeed, as indicated on Amazon, the company's remaining optical drives for computers "will be discontinued as soon as Amazon's stock runs out".

While this news won't make a huge difference to home cinema fans, who have already gotten used to Pioneer's absence, it does firmly shut the door on any possible return of Pioneer Blu-ray players and sadly represents another step in the depressing decline of physical media as a whole.

Manufacturers have been withdrawing from the Blu-ray player market at a disappointing rate, with LG the last major brand to have pulled the plug. It's not all doom and gloom, though — Sony recently launched its first 4K Blu-ray player in over five years, the UBP-X700/K.

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NEWS FROM THE (FINAL!) HIGH END MUNICH SHOW

It was a historic, bittersweet High End Munich 2025, being the last High End show in the Bavarian capital before it moves to Vienna, Austria, next year. In its 41st year, Europe's biggest hi-fi show hosted over 500 exhibitors and 1,000 brands at the MOC Event Center Messe München (try asking for directions there with your mouth full of bratwurst!), and in typical fashion many of them saw the event as the ideal stage on which to launch their latest kit. My colleagues were on the ground and, between chugging steins, reported back on the most exciting announcements...

Qobuz gets Connect

In what was possibly the worst-kept secret in recent hi-fi news, Qobuz Connect officially launched at the show. The highly anticipated feature joins Tidal Connect and Spotify Connect in delivering a more seamless streaming experience through your hi-fi system, along with simplified control over your Qobuz library and across devices.

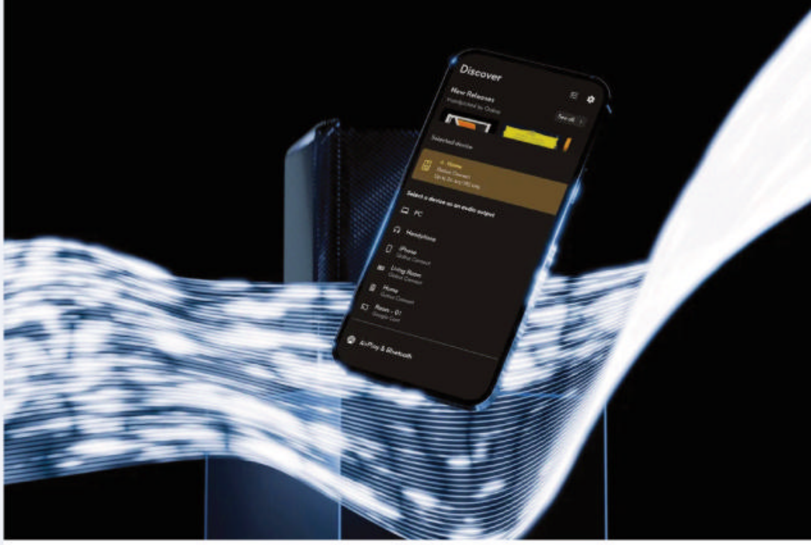
Qobuz Connect enables users to stream music directly through the Qobuz app to control their compatible hi-fi devices without the need for third-party applications. My colleagues who were given early access to the functionality confirmed that it behaves similarly to its rivals' Connect function. That is, all the streaming duties are handed off to the supporting hardware (e.g. a Connect-enabled streamer connected to your network) instead of being locally tied to your smart device, while the native app is used simply as a controller. Qobuz Connect is available on iOS, Android, Windows and MacOS devices.

Previously, streaming Qobuz from your phone or tablet meant going via Bluetooth, AirPlay, Chromecast or the limited Qobuz app experience baked into a supporting hi-fi product's own app. It also meant that incoming calls, video clips or turning your phone off would interrupt the streaming.

The music service has a library of over 100 million tracks in hi-res (up to 24-bit/192 kHz) and lossless CD quality, and this will be fully accessible via Connect-supporting devices, with Qobuz promising an "unrivalled listening experience, whatever the device used".

Qobuz Connect also keeps the mobile and desktop apps synced up, and you can switch audio streams between connected devices at the tap of a button. Your music will therefore pick up from exactly where you left off when you switch playing from your laptop to your phone, or from your headphones to your hi-fi system.

The Connect feature has been developed in collaboration with StreamUnlimited Engineering, a technology partner of many hi-fi audio brands that facilitates such integration into existing and new products, so expect to see Qobuz Connect supported by a huge number of brand offerings. It is already available in products from over 40 hi-fi companies, including Marantz, Denon, Arcam, Audiolab, dCS, Eversolo, WiiM, Focal, JBL Premium Audio, McIntosh and Naim Audio.



audio-technica

AT-LPA2

Fully Manul Belt-Drive Turntable

UNVIEL THE PURITY OF *ANALOGUE AUDIO*

The finest turntable we've ever produced.

Available now from authorised Audio-Technica specialists, discover more below.

High-Density
Acrylic Chassis

Includes AT-OC9XEN
Moving Coil Cartridge

External Power
Supply

Newly Designed
Tonearm

Ultimate transparency

Audio-Technica, meanwhile, unveiled a new premium turntable, the AT-LPA2, and it is quite the looker, with a fully transparent aesthetic that lays bare the inner workings of the fully manual, belt-drive design.

The AT-LPA2 is based on the limited-edition AT-LP2022 that was developed to celebrate the Japanese brand's 60th anniversary a couple of years ago, with the new full production model featuring a new arm, cartridge and price point.

The deck features a 30mm high-density acrylic chassis and a 20mm acrylic platter. Apart from delivering a striking transparent look, the material also offers "exceptional" resonance control to prevent unwanted vibrations from affecting vinyl replay.

An optical sensor is also included beneath the spindle, which constantly monitors the platter rotation so that it spins at the correct speed (33 1/3 or 45rpm) consistently.

Instead of the rather entry-level AT-VM95EBK cartridge with a Shibata stylus that was fitted on the anniversary model, the AT-LPA2 is fitted with the company's more premium AT-OC9XEN dual moving-coil design. This is attached to a newly designed, straight carbon fibre tonearm for "superior tracking and stability". It allows for adjustable VTA and azimuth, and includes an anti-skate mechanism as well as two counterweights (110g and 130g) to ensure compatibility with a wide variety of cartridges, should you wish to upgrade in the future.

The turntable is equipped with a separate power supply and control unit, too, ensuring that the chassis is isolated from any noisy, unwanted electrical interference from the power supply.

Also new from Audio-Technica is the next generation of its popular VM moving-magnet cartridge series. Collectively known as the AT-VMx, the new lineup includes the 500x, 600x and 700x models. There are nine models in total with different styli and design variations; three cartridges in the 500x range, four in the 700x subset and two monoaural cartridges with the 600x series.

The AT-VMx is the first major update of the VM series since 2016 and promises usability improvements and clear progression at every price point, designed to cater to both vinyl newbies and seasoned turntable aficionados.

Based on confirmed overseas prices, I would estimate Australian figures to be between $3,500-4000 for the AT-LPA2 and from $200 for the new cartridges.

JBL journeys new peaks

JBL's flagship Summit Series has gained three new members: Makalu, Pumori and Ama, which join the existing Everest and K2 models. Like their forebears, each speaker is named after a Himalayan peak and promises to reach the large-scale sonic heights their respective price levels demand.

They share much in common: heavily braced cabinets and binding posts wrapped in carbon fibre and plated in rhodium, plus the company's IsoAcoustics adjustable isolation feet. They also boast JBL's MultiCap crossover network, which promises to maintain purity and performance throughout the audio chain.

The range topper is Summit Makalu, named after the world's fifth-highest mountain, just 12 miles from Everest. According to JBL, the three-way floorstander is designed to "anchor large, immersive listening spaces with deep, articulate bass and soaring midrange detail," courtesy of a 12-inch subwoofer and an 8-inch midrange driver that both use JBL's HC4 composite cones (a proprietary formula of carbon-fibre and pure-pulp front and rear surfaces, sandwiched with an internal core of closed-cell foam). They work in conjunction with JBL's patented D2 compression driver and a precision-moulded HDI Sonoglass horn that the brand says delivers "stunning dynamics and crystal-clear imaging." That is all packed into a contoured cabinet with either a rich ebony veneer with gold accents, or a high-gloss piano black with platinum detailing. These are the finish options for the other two models, too.

Next up is Summit Pumori, after Mount Pumori on the Nepal-China border, also known as the daughter of Everest. Here we have smaller albeit similar-looking three-way floorstanders with the same D2 compression driver, HDI horn architecture and 8-inch midrange driver as its reference sibling, only this time those units are paired with a 10-inch woofer.

The Summit Ama is named after Ama Dablam, one of the Himalayas' most iconic and picturesque peaks — its name translates as 'Mother's Necklace'. This is a two-way standmount that is naturally more compact than its stablemates but shares much of their tech, including the 8-inch HC4 cone woofer, D2 compression driver and HDI horn. They come with matching steel and aluminium stands.

Announced international pricing puts estimated Australian costs at roughly $78,000 for the Makalu, $57,000 for the Pumori and $32,000 for the Ama.

WiiM's HomePod killer

There For You
Martin Garrix

OK so WiiM products can't, by any reasonable stretch of the price classification, be deemed 'high-end', being some of the most successful budget audio components of the past few years. But that didn't put the brand off launching new gear at High End. After introducing the Ultra streamer and Amp Pro streaming amp at last year's show, it was back in Munich with three brand-new products, one of which could well push the price ceiling a little higher for WiiM (pricing will be announced later in the year).

Say hello to the Amp Ultra, a streaming amp that, as its name suggests, looks to combine the talents of the Ultra streamer with those of the existing Amp (and Amp Pro) streaming amp. Which is a good start. WiiM says that the Amp Ultra actually builds on the power of the Amp and Amp Pro models, delivering 100 watts per channel (into 8 ohms) compared with 60 watts.

That slick touchscreen from the Ultra has been carried over, while the aluminium chassis is also familiarly minimalist. As with all products in WiiM's ecosystem, the central nervous system of the Amp Ultra is the company's operating system and Home app, which is an access gateway to several music streaming apps, including Spotify, Amazon Music, Tidal and Qobuz.

Google Cast, Alexa Cast, DLNA, Spotify Connect, Tidal Connect and Bluetooth are also supported, as is voice control via Alexa, Google Assistant and the included WiiM Voice Remote. WiiM users will be familiar with the additional functions offered by the app, such as automatic room correction, multi-room grouping and control, and EQ customisation.

In addition to its music duties, the Amp Ultra offers TV integration features such as HDMI ARC, Dolby Digital decoding and a subwoofer output. In fact, as the network amp can simultaneously power up to four pairs of speakers, it can also be used as the hub in a multi-channel (up to 4.1) system, or alternatively to drive a couple of stereo setups.

A little less 'WiiM' is its next new product, which, I must say, I didn't see coming. Having formerly partnered with multi-room mogul Audio Pro to dip its toes into the wireless speaker waters with two 'WiiM Edition' variants, the company is now diving headfirst into it with its very own smart speaker.

The WiiM Sound speaker reminds me of something… indeed, its resemblance to Apple's established HomePod is difficult to ignore. But look past that obvious design inspiration and WiiM's knack for offering extensive features and an accessible user experience begins to surface.

It boasts the streaming features and support typically found in WiiM products, and there is a playback control alternative to the app: a 1.8-inch touchscreen. This has been a much-rumoured feature for the next HomePod family member, so WiiM seems to have beaten the tech giant to the punch.

The speaker can work in a multi-room environment with other WiiM products; two Sounds can be paired together to make a left/right stereo set-up; and AV integration is possible by using the speaker as a surround or centre channel in a Dolby 5.1 solution.

A four-inch woofer and dual-balanced mode radiator tweeters together deliver 100 watts of "room-filling" audio, with hi-res support included all the way up to 24-bit/192kHz. If WiiM can undercut Apple here, which it will likely do, the Sound could well be a tempting proposition for budget-conscious buyers.

Double-anniversary Gryphon

Gryphon Audio celebrates two anniversaries in 2025 — its 40th year and the 30th year of its Antileon Series power amplifier. So it's pretty fitting that the Dutch company has now introduced its fifth-gen Antileon, the Antileon Revelation.

Gryphon's power amp ethos was first epitomised in the 1991-released DM-100, what with its dual-mono design, pure Class A circuit topology, high-current output and ability to drive virtually any speaker — and that DNA has run through the line ever since. The Antileon Revelation is supposedly "the finest amplifier ever to wear the Antileon nameplate".

The latest iteration of Gryphon's best-selling power amp has quite the foundation from which to build on, then, and the heritage is visually evident with the continuation of the Evo's metalwork, with a large Gryphon sculpture now crowning the transformer cover. But Gryphon is keen to convey that this is not merely an evolution of what has come before, but a — yes — revelation, claiming that it "advances its predecessors' considerable strengths, boasting thunderous, pitch-perfect bass, more extended and airy trebles and the grainless, palpable, three-dimensional midrange that only pure Class A output circuitry can deliver."

As with all Gryphon power amps, both stereo (160 watts per channel) and mono (180 watts) versions are available. Inside each chassis are 40 high-current bipolar output transistors — identical to those found in the flagship Apex — and 335,000uF of power supply capacitance per channel. Two custom-wound 1,500VA toroidal transformers (or four in mono pair setups) are fitted to each constrained-layer-damped, 90kg enclosure, while a third independent power supply is dedicated to digital control circuitry.

The Gryphon Audio Antileon Revelation will be available in Australia later this year, priced at $64,995.

Evo-n better

Wharfedale's Evo 4, one of the most acclaimed affordable speaker ranges in recent years, now has a successor: the suitably named Evo 5 series.

Comprising the Evo 5.1 two-way standmount ($1,249), Evo 5.2 three-way standmounts ($1,749), two three-way floorstanders — the Evo 5.3 ($2,599) and Evo 5.4 ($3,299) — and an Evo 5.C centre channel ($1,249), the new mid-range family is hardly just a lick-of-paint update, boasting updated cabinets, drivers and crossovers as well as new damping technology.

The Evo models have always benefited from premium tech, such as an AMT (Air Motion Transformer) tweeter and a domed midrange driver. For the Evo 5, that AMT unit is bigger (35x70mm compared to the Evo 4's 35x60mm), while the 50mm midrange driver has been further developed to match the larger high-frequency unit.

That AMT and midrange feature a new sound-absorbing cotton/felt hybrid material called SilentWeave, specially designed for the Evo 5 line and helping to reduce sound wave reflections from inside the cabinet.

A further damping element in the form of a frame (ResoFrame) features across all drive units, too. This is made from elastomer and is a "cog-like shape within the driver's front panel". The AMT tweeters also have a further damping gasket between the diaphragm and front plate that reduces mechanical resonances for a smooth response in the lower treble region.

The Evo 5's bass and mid/bass drivers also feature dedicated new technology. Alongside the ResoFrame is a new low-mass elastomer damping ring, situated at the rear of the driver cone where it meets the surround. This aims to optimise the lower midrange frequencies, with Wharfedale promising voices that "sound richer, more natural and more emotionally engaging".

The crossovers have also been redesigned, with shorter paths between the components and drive units. In the three-way models, the circuit layout is split into two (one for the treble and mids, one for bass) to reduce electromagnetic interference.

Wharfedale's SLPP (Slot Loaded Profiled Port) bass-reflex design has also been upgraded to fire in three directions (as opposed to two) — left, right and to the rear. This is designed to enhance low-end extension and integration, improve the uniform dispersion of air in the room and make the speakers less fussy about room placement.

Finally, the cabinets across the range are proportionately a little larger to account for the larger driver and revised crossovers. Available in walnut wood veneer or a matte black, white or (brand-new) grey, the cabinet is made of wood layers of different densities in order to reduce resonance, while a hybrid metal/wood plinth sits at the base of every speaker, where the bass-reflex vents are.

Level-up Levinsons

You're always guaranteed to see tasty new high-end hi-fi being exhibited by Mark Levinson at the High End Munich show, and this year was no different. Say hello to the company's brand-new 600 Series of amplifiers, which sits above the established 500 Series.

The range consists of three models: the No. 626 preamplifier, No. 632 stereo power amp and the No. 631 monoblock. Each is built on Mark Levinson's Pure Path circuit philosophy and showcases the brand's trademark Tectonic industrial design, which sees a machined, black-anodised aluminium chassis adorned with silver controls. Glass panels and signature red accents and lighting complete the striking aesthetic.

The No. 626 uses fully balanced Pure Path architecture for the analogue section, with connectivity coming in the form of two balanced (XLR) and three single-ended (RCA) inputs, a MM/MC phono stage and a Main Drive Class A headphone amp. Meanwhile, the digital number-crunching is handled by its Precision Link III DAC, which supports up to 32-bit/384kHz PCM and native DSD through six digital inputs — two coaxial, two optical, AES/EBU and USB-C.

The No. 626 has been designed with modular isolation in mind and includes special shielding of the power supply circuit and digital source circuit from the analogue and phono circuitry. It also uses twin power supplies and comes fitted with vibration-damped isolation feet.

Both the No. 632 and No. 631 power amps feature Class A/AB amplification, Pure Path fully balanced signal paths and meaty toroidal power supplies. The latter uses an eye-catching floorstanding chassis which stands just under 53cm tall.

Confirmed pricing is between US$25,000 and US$40,000, with Australian availability expected towards the end of the year.

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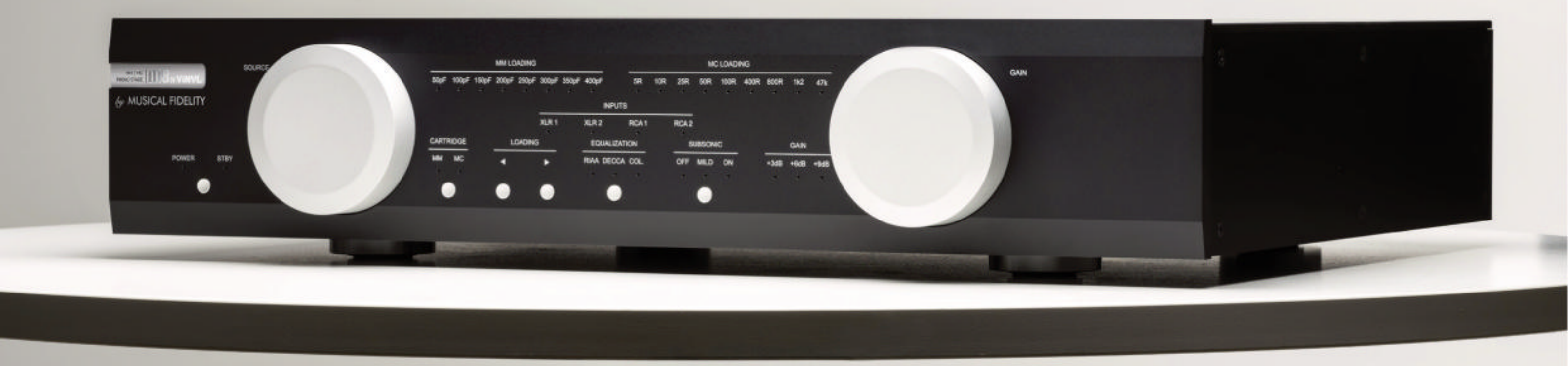


Musical Fidelity M8x Vinyl

Phono Preamplifier

- Fully balanced
- Incredible flexibility
- Superb sound

- 40dB gain LED

RRP **$7,200**

If the features of Musical Fidelity's latest phono preamplifier were listed on a restaurant menu, my wife would be horrified. "What do you mean there are no chips?" I can almost hear her saying. I can also imagine Musical Fidelity's genial CEO, Heinz Lichtenegger, rushing over to reassure her that their absence is purely down to the fact that only the highest-quality dishes will do. In terms of amplification and specifically the M8x Vinyl, this translates to his use of discrete electronic components — individual resistors, transistors and capacitors — instead of chips.

The chips to which I refer are, of course, integrated circuits (or 'ICs'), tiny monolithic electronic components that can perform multiple functions because encapsulated inside them are multiple resistors, transistors and capacitors. They're called 'chips' (or more precisely, 'microchips') due to all these components being etched onto a single small flat piece of semiconductor material, usually silicon.

Lichtenegger believes that discrete components can deliver higher levels of performance than ICs, which generally have a limited ability to dissipate power (due to their small size) and are prone to damage from high voltages or excessive current flow. It's also not possible for an IC to incorporate large-value resistors and capacitors. From a user perspective, a circuit consisting of discrete components is easier to repair, too.

However, Lichtenegger provides another reason for choosing discrete components: "Countless hours of listening tests have shown us that even the very best op-amps [a specific type of IC that contains six transistors and one or two resistors] do not tend to be so neutral, natural, dynamic or vivid — all of which are characteristics of the Musical Fidelity sound."

Like many of Musical Fidelity's products these days, the M8x Vinyl phono preamp is built entirely in countries within the European Union, a switch in locale initiated when Lichtenegger purchased the company from its founder, Anthony Michaelson, in 2018.

THE EQUIPMENT

The M8x Vinyl is not a totally new design, inheriting many of its circuit design features from the older M6x Vinyl, which continues in Musical Fidelity's product line. The M6x Vinyl was one of the first phono stages in the world with balanced inputs, one of the very few to offer multiple phono inputs, and a rare example of one using dual-mono circuitry. This trio of traits are also part of the M8x Vinyl's makeup, except that this time Musical Fidelity has gone one step further: the circuitry is not only dual mono but also fully balanced from input to output.

The provision of multiple inputs on a phono stage would generally introduce complications for users. After all, if you have different phono cartridges connected at once, each is likely to require a different load capacitance, load impedance and gain requirement, so every switch would require several additional changes. You do not need to do this with the M8x, though. It 'remembers' the specific capacitance, impedance and gain settings for each input and applies these automatically whenever you switch to it. The M8x also remembers each input's equalisation and subsonic filter settings, so switching from one phono cartridge to another (and potentially from one turntable to another) is really as simple as moving the large rotary dial on the front panel's left-hand side, which cycles through two balanced (XLR1, XLR2) and two unbalanced (RCA1, RCA2) inputs. Each can be set for either moving-magnet or moving-coil operation.

Other than for gain selection (between 0dB, +3dB, +6dB and +9dB), which is accomplished using the right-hand side rotary dial, all other circuit adjustments are made using the five small push-buttons at the bottom of the panel.

That you can make all adjustments using only a handful of buttons and two easily accessible dials is a wonderful achievement; most other phono preamps providing similar adjustments require you to make them by flicking micro-switches inside or at the back of the chassis or — trickier still — by removing and inserting tiny 'U-shaped' jumper connectors on a printed circuit board inside the chassis.

From left to right, the first button selects cartridge type, MM or MC. The second and third respectively select the value of the applied load capacitance (50, 100, 150, 200, 250, 300, 350 or 400pF) in the case of MM cartridges, and the load resistance (5, 10, 25, 50, 100, 400, 800, 1200 or 47,000 ohms) in MC designs.

The next button along selects which of three standard equalisation circuits you would like to use depending on the type of LP you're playing. The choices are between RIAA (Record Industry Association of America), Decca (Decca Records) and COL (Columbia Records). Essentially, this allows you to adjust the balance of the bass and treble you are hearing from the LP you're spinning. Only one will be the technically 'correct' balance for any specific LP, but it's just as valid to choose which one you find gives the best balance of sound for your room and ears, not least because the high-frequency response of an LP will diminish after repeated playback.

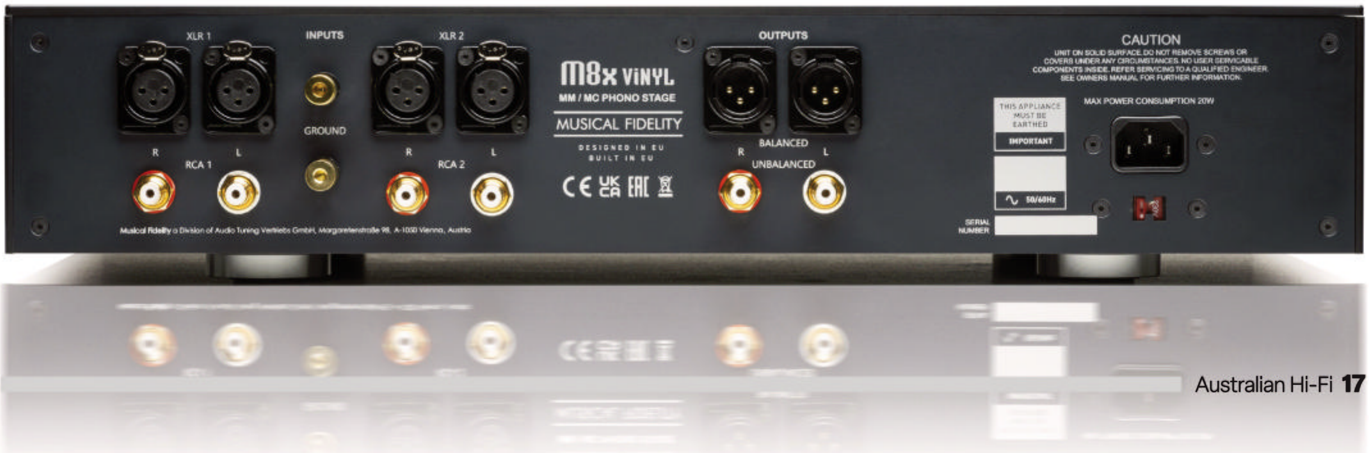
Such equalisation can be achieved with either active or passive circuitry (or a combination of both), but as the former generally requires the use of ICs, and Musical Fidelity eschews their use, the M8x Vinyl uses passive RIAA (and Decca and Columbia) equalisation. This employs a complex network of resistors and capacitors to provide different levels of attenuation at different frequencies.

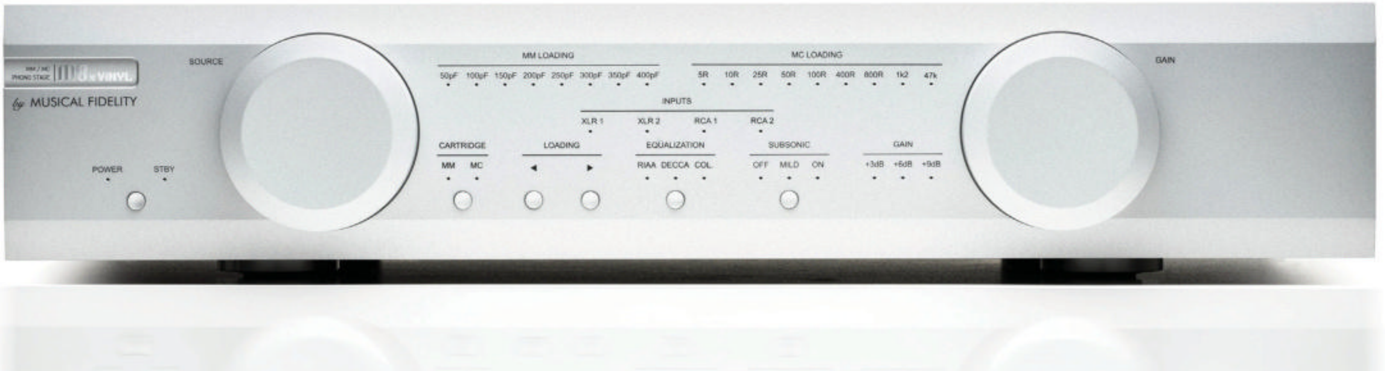
The complex circuitry required for passive equalisation is offset by its many advantages, which include no voltage overload, negative feedback, instability issues or high-frequency gain limits. There is, however, one huge disadvantage: the circuit offers no gain at all. In fact, there is an insertion loss, so one or more separate gain stages are required to boost the phono cartridge's voltage up to a level that can drive a preamplifier. This is usually achieved by splitting the passive circuit into low-frequency and high-frequency sections, then inserting three separate gain stages — one before the LF section, one between the two, and one after the HF section. This is exactly the implementation used in the M8x Vinyl, as you can see in the image showing its circuit topology on page 20. Keen-eyed readers will no doubt spot some ICs on the printed circuit board, but Musical Fidelity assures me that these are not in the signal path!

> You can make all adjustments using only a handful of buttons and two easily accessible dials

You then have a button for inserting a subsonic filter into the signal path if you so wish. You have the choice of the standard IEC filter (ON) or one with a rather less severe filter action (MILD). The primary reason for using a filter would be to remove unwanted low-frequency information contained on an LP itself. For example, many recordings made in London's famous Kingsway Hall in Holborn inadvertently included rumbling sounds caused by tubes travelling on the London Underground's Piccadilly line underneath the venue. This noise was present on so many recordings that it became known as 'Kingsway Rumble'. Another reason would be to remove low-frequency noise introduced by the turntable itself, from the main bearing, the motor, or both!

Incidentally, although I have used Musical Fidelity's description of its filter as a 'subsonic' one for the purpose of clarity, it's more technically accurate to describe it as an 'infrasonic' filter. Infrasonic is the correct term to describe sound waves with a frequency below the lower limit of human audibility, generally accepted to be 20Hz.





The word 'subsonic' should be reserved to mean 'lower than the speed of sound'.

Finally, you can adjust the gain. While it appears that you can select three different settings, there being an LED each for the +3dB, +6dB and +9dB options, there is actually a hidden fourth — 0dB. I have no idea why Musical Fidelity did not provide the extra LED and gain-level identifier, but I must say I found the omission annoying. Although maybe it's just me — after all, once you know what's going on, you immediately know that if none of the LEDs are illuminated, gain is 0dB. I like to think this decision was an in-joke on the part of the design team, along the lines of 'zero gain, zero illumination.' Although if this is true, it's not technically accurate, as when all the LEDs are off, the gain is not 0dB at all; the M8x Vinyl actually provides 40dB and 60dB of gain respectively for the MM and MC settings. Switching to '+3dB' results in an actual overall gain of 43dB/63dB, and so forth.

It's probably the right time to point out that whatever gain setting you apply affects the voltage at both the M8x Vinyl's balanced XLR and unbalanced RCA output terminals, and that both terminal sets remain on at all times so that they can drive two components simultaneously.

It's highly likely that many readers will find it difficult to equate a specific gain setting with a specific output voltage, or be able to easily work out how adjusting gain would affect that output voltage, so here are two accessible examples of how it would work in day-to-day use...

If your moving-magnet cartridge delivers 5mV to the M8x Vinyl's input terminals, and all three LEDs are off (40dB of gain), you would measure 500mV at the output terminals. If you then pressed the +6dB button, you would measure 1000mV at the output terminals.

Or, if your moving-coil cartridge delivers 0.5mV to the M8x Vinyl's input terminals, and all three LEDs are off (60dB of gain), you would still measure 500mV at the output terminals due to the extra 20dB of gain provided by the MC setting. If you then pressed the +6dB button, you would measure 1000mV at the output terminals.

While it is certainly handy to have 3dB, 6dB or even 9dB of additional gain available should it be required (such as to cope with extremely low-output cartridges), you should note that the more gain you use, the greater the possibility of noise being introduced, thus the greater

Try to use as little of the M8x Vinyl's gain as possible; ideally, stick with the 0dB (no LEDs illuminated) setting

EXPLAINING PHONO EQUALISATION

The purpose of a phono preamplifier — its *raison d'être*, if you like — is to 'correct' the frequency response of the signal that the diamond tip of your phono cartridge's stylus extracts from the LP's groove. This is necessary because, in order to store music on an LP, the cutting engineer has to pre-attenuate low-frequency levels and pre-boost high-frequency levels. At the midway point (1kHz), there is no boost or cut. This is the 0dB point.

So as the musical sounds being recorded on the LP get progressively lower in frequency, their levels are incrementally reduced until at 20Hz they are 19.3dB lower than those at the 0dB reference at 1kHz. The exact opposite happens with frequencies above 1kHz. The higher the frequency of the music being recorded, the more the audio signal is boosted until, at 20kHz, it is boosted to +19.6dB.

Because these applied boost and cut levels are different for every frequency, the overall effect is described as an 'equalisation curve', the most common of which is the RIAA curve, so called because it was developed by the Record Industry Association of America. However, prior to the development of the RIAA curve, the various record manufacturers used their own custom equalisation curves, all of which applied differing boost and cut levels. Hence, if you played an LP recorded by Columbia Records, you would have to use a Columbia equalisation curve to ensure correct playback. If you played an LP recorded by Decca, you'd need to use a Decca equalisation curve, and so on.

To ensure that the correct response is sent to your main stereo amplifier, then, a phono preamp must provide an inverse RIAA (or other standard) curve to restore the frequencies to their correct levels. For example, by boosting the bass at 20Hz by 19.3dB and cutting the treble at 20kHz by 19.6dB in the case of an RIAA curve.

But what happens below 20Hz? If the RIAA equalisation boosts frequencies below 20Hz, this means that unwanted low-frequency sounds from your turntable (drive motor, bearing noise etc), as well as from your LPs (record warp and sounds actually inadvertently recorded at the original recording session), would be made more audible. It is for this very reason that, in 1976, Europe's International Electrotechnical Commission (IEC) authorised the RIAA replay curve to be modified in such a way as to reduce (attenuate) frequencies below 20Hz.

This resulted in two different RIAA curves — plain old RIAA (no attenuation below 20Hz) and IEC-RIAA (with a steep filter to remove frequencies below 20Hz).

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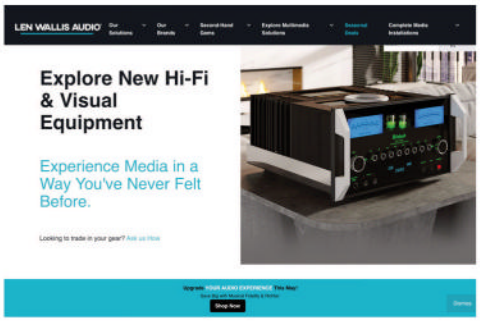

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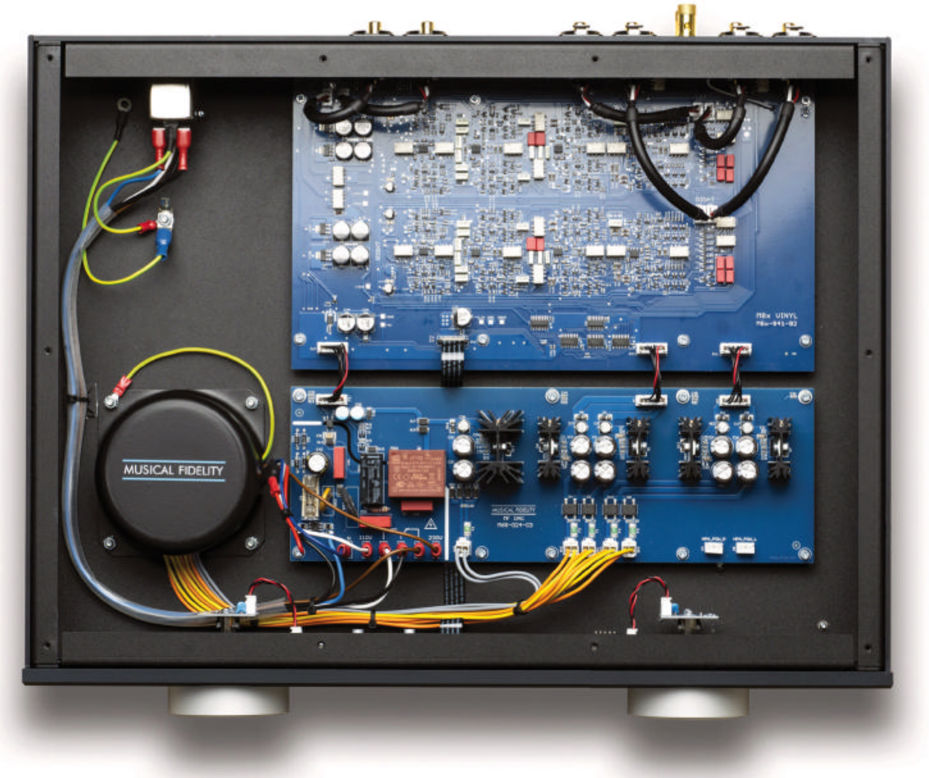

the potential for unwanted distortion. My advice? Try to use as little of the M8x Vinyl's gain as possible; ideally, stick with the 0dB (no LEDs illuminated) setting.

You should avoid comparing the sound of the various gain settings, too, because given two otherwise identical sounds, you will always prefer the louder one due to a fault in the 'aural circuitry' linking your ear to your brain. It's akin to the trick your eyes play on you if you look at two lines of identical length, one of which has outward arrows at either end, and the other has inward arrows. The latter always appears to be longer.

LISTENING SESSIONS

As mentioned previously, the left-hand side dial selects which of the four inputs you would like to use at any time, enabling you to use up to four turntables, or one or two turntables fitted with multiple tonearms, which is really useful if you use one cartridge for non-critical playback and another for special situations (such as transferring new vinyl to a digital format).

If you *are* switching back and forth between different cartridges, I should also reiterate that the M8x Vinyl is one of the few phono stages (the M6x Vinyl is another) with multiple inputs, allowing you to set different loadings for each, and automatically selecting the correct one.

I first listened to Deep Purple's 1980 Best Of album (known as Deepest Purple) because its levels are very low, due to Warner (Parlophone) wanting to squeeze 30 minutes of music on each side, making it the longest-playing 'Long Play' record ever released. I chose it to test the M8x Vinyl for the same reason I had to test the M6x Vinyl: to evaluate the higher-gain settings. Indeed, while the settings were designed to help with low-output phono cartridges, they're also useful when replaying albums with low levels.

I was pleased to hear that despite the increase in volume that resulted from using the 'plus' settings, I could hear no additional distortion and the overall frequency balance remained constant. The bass 'n' drums sounded as authentic as I've ever heard them, while Blackmore's guitar screamed exactly as it should. I realised, however, that I didn't need the additional +6dB or +9dB gain, but that the +3dB setting (not available on the M6x model) worked a real treat. Ian Paice's inventive drumming on *Strange Kind of Woman* was delivered beautifully by the M8x Vinyl, and Jon Lord's electric organ playing on *Child in Time* was equally well handled. On the

The bass 'n' drums sounded as authentic as I've heard them... Blackmore's guitar screamed as it should

How do the M8x Vinyl and M6x Vinyl compare?

Appearance: The M8x is bigger and better-looking, with solid aluminium side and top panels (the M6x uses bent alloy). Of course, it also has those great-looking control dials, which the M6x does not have.

Gain Settings: The M8x has four levels each of MM and MC gain, whereas the M6x has only two levels of gain for each.

Capacitance: Both models offer the same minimum and maximum loads (50pF and 400pF), but the M8x has two more intermediate settings (150pF and 250pF). This is not really a significant difference.

Impedance: The M8x has nine load options versus six on the M6x, the additional loads being 5 ohms, 10 ohms and 47 kohms. If your cartridge requires one of these extra loads, this is a significant difference, otherwise it is not.

Equalisation: Both models have split passive equalisation with three gain stages, but the M6x only has the RIAA equalisation curve, whereas the M8x adds Columbia and Decca curves too.

Low Filter: Both models have subsonic filters, but the M6x has only a single IEC filter, whereas the M8x has both IEC and 'Mild' filters.

Inputs: The M8x has four inputs (two balanced, two unbalanced) against the M6x's three (one balanced, two unbalanced).

Circuitry: Both models are dual mono, but whereas only the M6x's input stage is balanced, the M8x is balanced throughout.

Power Supply: The M8x's power supply is three times larger than the M6x's, and its transformer is encapsulated to reduce stray radiation. Both models use super-silent toroidal transformers.

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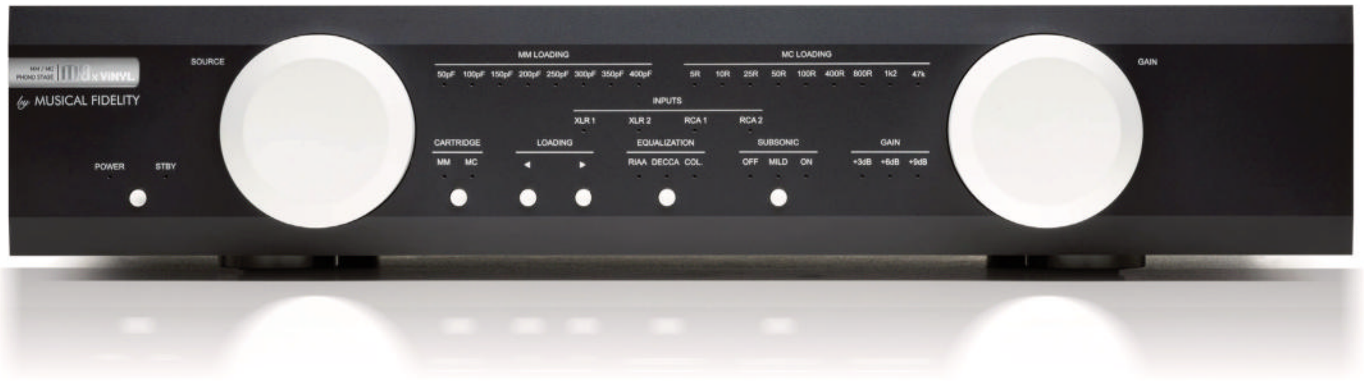

flip side, *Highway Star* boogied on with the perfect pace and timing I expected to hear. The drum kit on *Space Truckin'* sounded outstandingly good, too.

Next up was The Dark Side of the Moon, another album I played while auditioning the sibling, although I actually always use it when reviewing phono stages and cartridges; it just has so many great testing tracks. This time around, I was not only listening for the deep bass, clock sounds and wordless vocal but also switching between the subsonic filter settings. I was rather surprised to discover that, whereas with both the M3x Vinyl and M6x Vinyl I preferred the IEC correction to the RIAA filter (the 'ON' filter setting on the M8x Vinyl), here I preferred the sound quality with the 'Mild' filter setting. However, you must remember that my turntable has no rumble needing to be removed with an IEC-standard filter, and I do not own any LPs containing 'Kingsway Rumble'! Your experience may well be different depending on your turntable and/or the albums you play, in which case I would recommend the 'ON' filter setting.

I confess that I switched between the different equalisation curves fairly often during the auditioning process without coming to any real conclusion about whether I had a specific preference. In the end, it really depended on the album playing. As for the effect of the changes, I'll just describe what I heard with one album, to keep it simple. Playing Cleo Laine and John Williams' Best Friends, I initially believed the RIAA curve provided the best balance, with the sound of Williams' acoustic guitar perfectly weighted against Laine's vocal. When I switched to the Decca curve, her voice was overall a little louder than his guitar, and the imbalance became even more pronounced with the Columbia curve. However, I made that call when listening to the opener, *Feelings*. A few tracks in, by the time I got to *Before Love When Out of Style*, I decided that perhaps I was wrong, and the guitar was just a little too far forward with the RIAA curve.

Once I had the balance to my satisfaction, I could start the LP all over again and luxuriate in the glorious sound quality afforded by the M8x Vinyl. The LP is beautifully recorded, with silent backgrounds and a warm, enveloping acoustic that complements Laine's exceptional voice.

> I have now auditioned three of Musical Fidelity's four phono stages... and all three are superb

CONCLUSION

At the risk of sounding like a broken record (because I've said it so many times in the past), I feel obliged to say that if you use a high-quality phono cartridge, it is absolutely *essential* to also use a high-quality, dedicated, external phono stage in order to hear it perform at its best. Phono stages built into preamplifiers and integrated amps are simply not good enough, even those in the very best-performing high-end models — particularly when using MC cartridges.

As it happens, I have now auditioned three of Musical Fidelity's four phono stages — the M3x Vinyl, M6x Vinyl and now the M8x Vinyl — and my opinion is that all three are superb. Although I believed the M6x sounded even better than the M3x when I reviewed it, if I had only the one turntable and didn't swap phono cartridges in and out, I would have been perfectly happy with the M3x. If I owned multiple turntables and/or regularly swapped phono cartridges, the M6x would be my phono stage of choice.

Now that Musical Fidelity has stirred the pot by introducing the M8x, which sounds even better than the M6x and also offers loads more features and flexibility in addition to the improved performance (not to mention looks by far the best of the three), I find myself in a real quandary not only as to which one I would own but also as to which one to recommend. Damn you, Mr Lichtenegger! **Ian Frazer**

SPECS & CONTACT

Warranty: 5 years
Inputs: 2 x RCA, 2 x balanced XLR
Outputs: RCA, balanced XLR
EQ curve: Split-passive RIAA, Decca, Columbia optimisation

MM:
Gain XLR outputs: 40dB, 43dB, 46dB, 49dB
Frequency response: ±0.2dB
Input impedance: 47kohm
Input capacitance: 50-400pF selectable
THD at 1 kHz: <0.005%
Signal-to-noise ratio: >102dB A-weighted at 40dB

MC:
Gain XLR outputs: 60dB, 63dB, 66dB, 69dB
Frequency response: ±0.2dB
Input impedance: 5 ohm to 47kohm selectable
Input capacitance: 400pF fixed
THD at 1 kHz: <0.008%
Signal-to-noise ratio: >90dB A-weighted at 60dB

Dimensions (HWD): 10.2 x 48.3 x 38.1cm
Weight: 10.6kg

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Laboratory Test Report

Readers interested in a full technical appraisal of the performance of the Musical Fidelity M8x Vinyl Phono Preamplifier should continue on and read the **LABORATORY REPORT** published on the following pages. Readers should note that the results mentioned in the report, tabulated in performance charts and/or displayed using graphs and/or photographs should be construed as applying only to the specific sample tested.

Newport Test Labs measured the M8x Vinyl's frequency response using an external inverse RIAA filter to correct for the effect of the M8x's internal RIAA compensation. The result of this measurement is shown in Graph 1 overpage, and you can see that, once you allow for the graph's exaggerated vertical scale (each horizontal division is only 1dB), the response is incredibly flat and linear, extending from 20Hz to 20kHz ±0.15dB. This is pretty much bang-on Musical Fidelity's specification. Below 20Hz, you can see the response rolls off only very slightly, to be about 1.7dB down at 5Hz. There is virtually no high-frequency roll-off at all, with the phono preamp being only 0.03dB down at 40kHz.

Channel separation was an astonishingly good 104dB (at 1kHz), proving the efficacy of the dual-mono and fully balanced circuitry beyond any shadow of a doubt. Channel balance was a superb 0.04dB (again at 1kHz), too, so the quality of the components on the circuit boards is obviously very high, as is the quality control of the boards themselves as evident by the uniformity of the gain between the two. Interchannel phase error was very low, at just 0.29 degrees — far better than would ever be required.

The effect of the two different low-frequency filters (it's actually more technically correct to refer to them as 'high-pass filters') is shown in Graph 2. The black trace is the standard RIAA response shown in Graph 1, while the red trace shows the effect on the low-frequency response when IEC-RIAA correction is applied (the 'ON' position of the M8x's subsonic filter). You can see that the response above 20Hz is hardly affected at all — a tiny boost in the 20–50Hz region — but the response below 20Hz is attenuated such that it's 16dB down at 9Hz and 33dB down at 5Hz, so is obviously an 18dB/octave filter.

The blue trace on Graph 2 shows the effect of the 'Mild' setting of the M8x's subsonic filter on the low-frequency response. Although its effect on the low-frequency response is indeed mild, such that the response is only 8dB down at 10Hz and only 15dB down at 5Hz, it also effects the response higher up in the audio band, between 20Hz and 100Hz, being 4dB down at 20Hz and about 1dB down at 50Hz.

Graph 3 shows the response of the M8x Vinyl's three equalisation filters— the standard RIAA filter (without IEC correction) is shown as the black trace, the Decca filter the red trace, and the Columbia filter the blue trace. You can see that the three are very similar between 100Hz and 1kHz. Bass is boosted more below 100Hz with the RIAA filter than it is with the other two, though, and above 100Hz the Columbia filter's response rolls off a little earlier than it does with the others. All three are different above 1kHz, albeit only slightly.

Note that switching between the filters will also alter the perceived volume level, so the 'loudest' one in each case will tend to sound 'better' than the other two, though in this case the music playing will also have an effect due to the frequency-dependent nature of the filters.

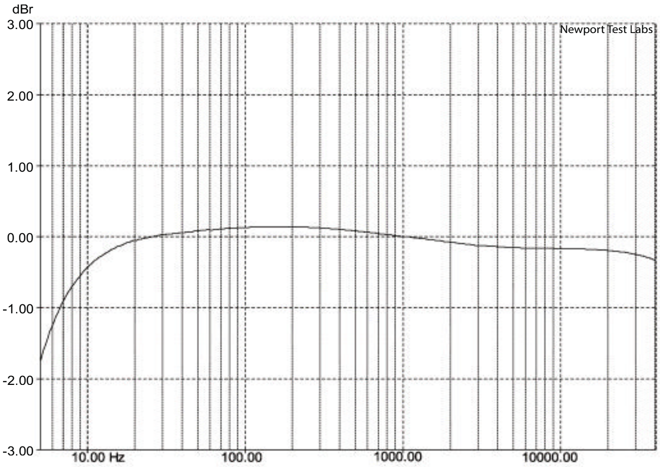
The response is incredibly flat and linear... pretty much bang-on Musical Fidelity's specification

Graph 4 shows THD at 1kHz, with *Newport Test Labs* presenting 5mV at the M8x Vinyl's MM input, using the 0dB gain setting (40dB of gain), resulting in an output of 522mV, so measured gain through the M8x at this setting was 40.37dB, rather than Musical Fidelity's specification of 40dB. You can see that the only harmonic distortion component visible in the output signal is a single second harmonic at –108dB (0.0003%). Audio-band noise is, as you can see, also very low. Overall distortion plus noise was measured at 0.009%, as shown in the tabulated test results below, very close to the company's 0.005% specification.

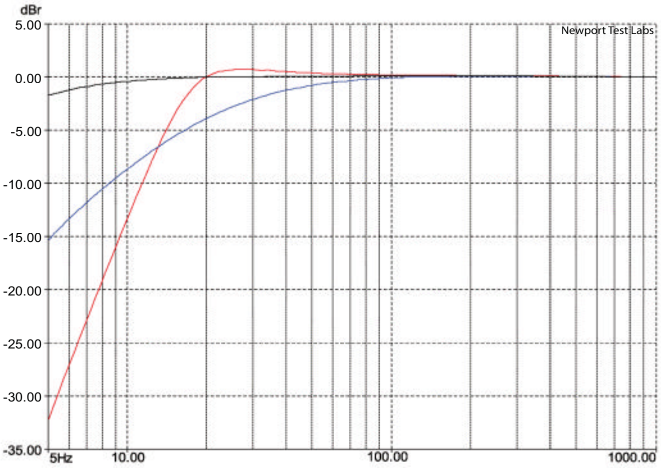
Newport Test Labs measured the signal-to-noise ratio using a worst-case scenario, with 5mV input and +9dB of gain (so an actual gain of 49dB) as being 79dB unweighted and 83dB A-weighted. The output voltage with this setting was 1.39 volts, so measured gain through the M8x at this setting was 48.88dB, close to Musical Fidelity's specification of 49dB. With a 10mV input, SNR ratios improved to 85dB unweighted and 88dB A-weighted. Measured SNR would further improve at lower gain settings, so the M8x is quieter

Musical Fidelity M8x Vinyl Phono Amplifier — Laboratory Test Results

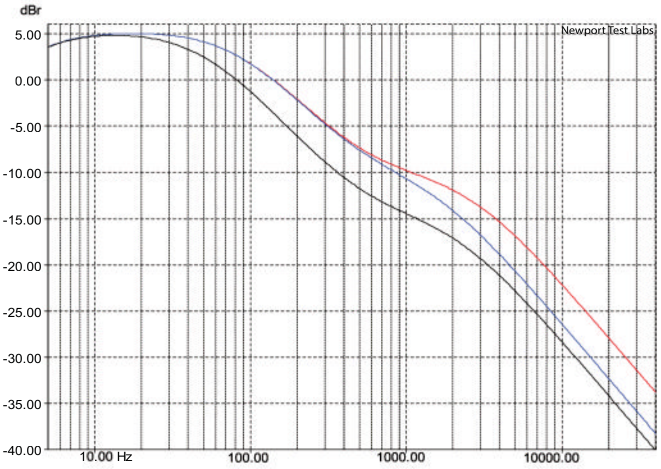
Test	Measured Result	Units/Comment
Frequency Response @ 2 volts out	See Graphs	–1dB
Frequency Response @ 2 volts out	See Graphs	–3dB
Channel Separation	104dB	@ 1kHz
Channel Balance	0.04	@ 1kHz
Interchannel Phase	0.29	degrees @ kHz
THD+N	0.009%	@ 2 volts out
Signal-to-Noise (unwghted/wghted) @ +9dB	79dB / 83dB	dB re 5mV in (1.39V out)
Signal-to-Noise (unwghted/wghted) @ +9dB	85dB / 88dB	dB re 10mV in
Input Sensitivity (MM)	5mV	for 1.39V out (+9dB setting)
Input Sensitivity (MC)	500uV	for 1.37V out (+9dB setting)
Power Consumption	021 / 16.58	watts at 1-watt / at rated output
Mains Voltage Variation during Test	243 – 245	Minimum – Maximum



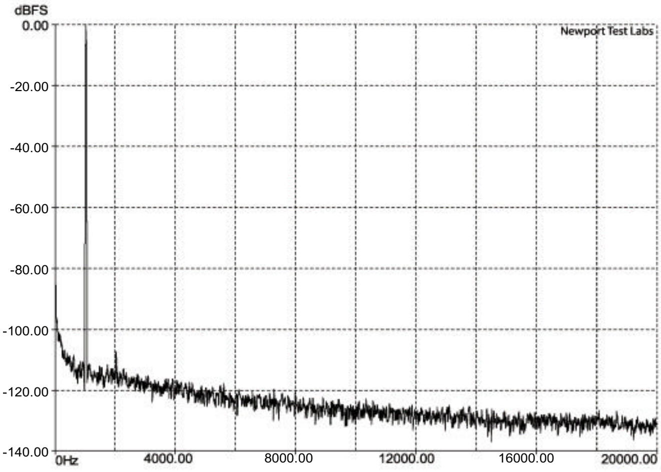
Graph 1. Frequency response of MM input with RIAA curve applied after RIAA compensation.



Graph 2. Low-frequency response of MM input. No LF filter (black), IEC filter (red), Mild filter (blue).



Graph 3. Uncorrected frequency responses showing RIAA (black), Decca (red) and Columbia (blue) filters.



Graph 4. THD at 1kHz, MM input, 40dB gain, 5mV input.

> Channel separation was astonishingly good … proving the efficacy of the dual-mono fully balanced circuitry

than you would ever need it to be when playing LPs.

The overload margin at 1kHz of both the MM and MC inputs was measured as being slightly better than Musical Fidelity's specification of 32dB, far higher than you will ever need to handle any cartridge.

The size of the M8x Vinyl's power supply was reflected by the relatively high power consumption measured by *Newport Test Labs* — 16.58 watts — but this is still low compared to most other hi-fi components, and the standby power consumption (measured as being 0.21 watts) was lower than both Musical Fidelity's specification and the requirement of the Australian standby power standard.

When I checked the archives to compare the M8x Vinyl's measurement results by *Newport Test Labs* against those it made on the M6x, I found that the M8x outperformed the M6x in every respect, so considering that I concluded the M6x's test report by saying that its measured performance "is far higher than will ever be required in any application for which it might be employed", I can only reprise that same conclusion for the M8x and its even higher level of performance.

Steve Holding

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- Affordable

- Dynamically limited
- Not quite a 'soundbar killer'

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Modern hi-fi enthusiasts can generally be confined to two distinct categories: those with the space, budget and willing to invest in a system of separate components for the ultimate performance-per-dollar music listening experience, and those who don't have the room or appetite for several boxes but still want an easy and accommodable way to listen to their favourite songs in a 'proper' (read: stereo) setup, most likely via network streaming.

While a streaming amplifier driving a pair of passive speakers can appease the latter category, the opportunity to go one step further up the simplicity ladder by removing the amplifier — a whole box, of course — in the chain is certainly possible thanks to the advent of wireless stereo speakers. Such pairs of powered speakers typically have everything you need for

music playback integrated into their two cabinets — speakers, amplifiers, and a source that is commonly wi-fi-powered network streaming, which opens the door to easy playback from Spotify and other music streaming services. Such propositions also reliably have sockets for connecting other audio sources, such as a turntable, CD player or TV.

If you haven't guessed yet, the Audio Pro A28 is one such example. These do-it-all speakers not only meet that criteria but are some of the most affordable and compact of their kind I have come across. The A28 launched at $899, although they can regularly be found with a discount of at least $100 from several of Australia's reputable online retailers.

If you're familiar with the Swedish audio brand, you may already know that the A28 have been knocking around for a few years, having launched in 2022. So why am I reviewing them for *Australian Hi-Fi* magazine now? Well, partly because I was reminded of their existence at the beginning of the year when a fetching new walnut veneer finish was released, and also because my British-based colleagues at *What Hi-Fi?* tend to rate Audio Pro speakers highly. I was keen to see what the fuss was all about!

That Audio Pro describes the A28 as a "soundbar killer", meaning they have been designed for not only music playback but also TV viewing, also piqued my interest. So how relevant today is this compact system solution and soundbar alternative in a market that has moved on three years since their launch?

DESIGN & CONNECTIVITY

The A28 is a wireless speaker system in the sense that it has been designed to first and foremost stream music, from streaming services or your own networked server, wirelessly. However, it isn't entirely cable-free, with the left speaker (the brains of the outfit, handling inputs and power) needing to be plugged into the mains, while a cable is also necessary to connect the two speakers. The latter isn't always required for this type of design, but it isn't an unreasonable impracticality at this price.

The A28 speakers are impeccably built and finished for their price point… the white finish exudes class

That supplied interspeaker cable is some five metres long, allowing you to position the speakers as far apart as you would probably wish (three metres is probably plenty in most rooms to ensure tight stereo imaging). Other sockets on the left speaker's rear panel include a trio of inputs — line-level RCA, optical and an HDMI with ARC compatibility for connecting to a TV. Note that if you intend to use these Audio Pro with your TV, you'll need to make sure your TV outputs in PCM; the A28 can't handle Dolby Digital codecs. Also, if you wish to connect a turntable to the A28's line-level input, only those with a built-in phono preamplifier will work directly. Alternatively, you would need to connect an external phono preamp between the turntable and speakers, adding another box (and, of course, expense).

There's no Ethernet socket on the A28, so you'll want a strong wi-fi connection to facilitate solid, reliable, drop-out-free network streaming.

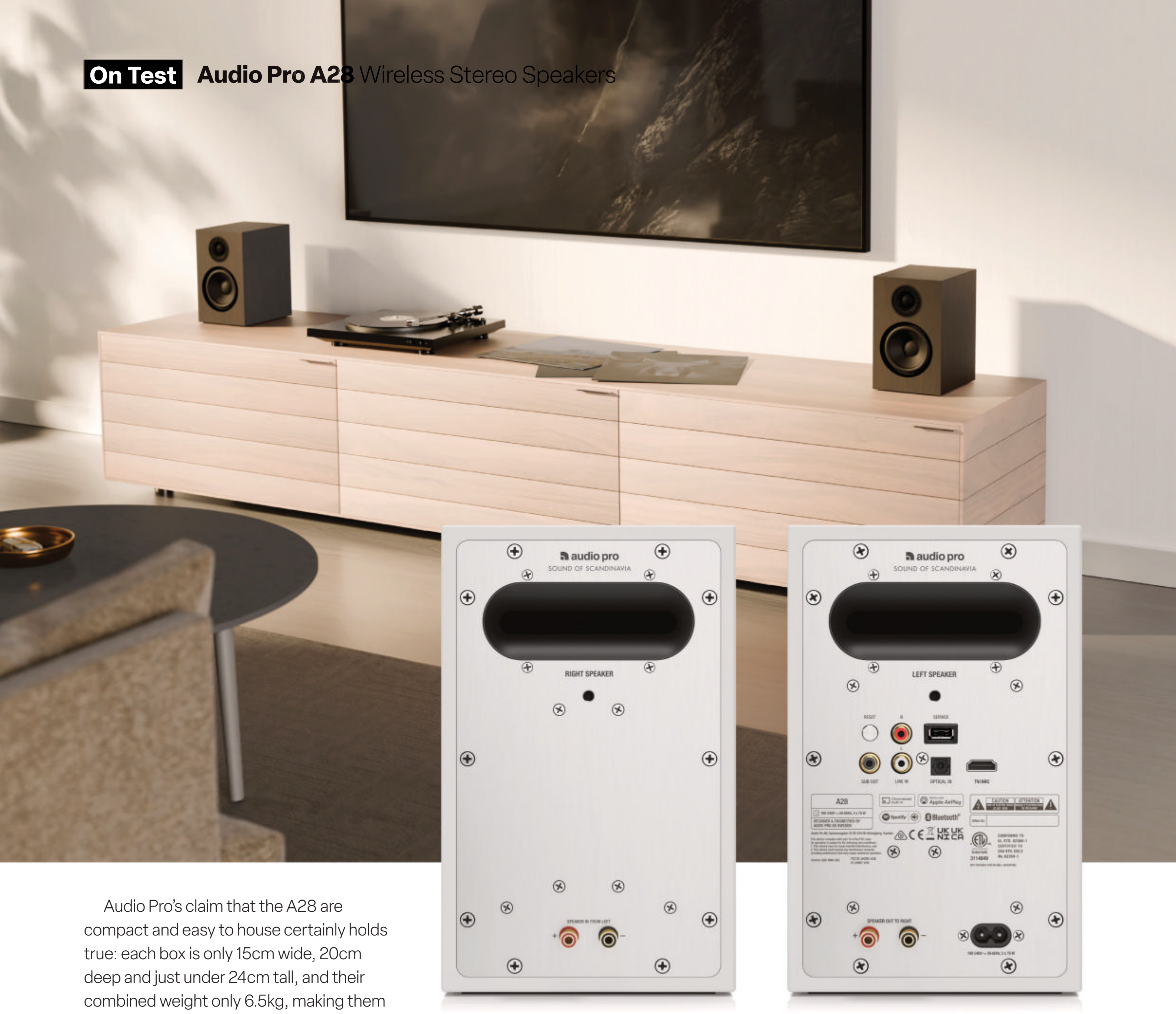
The A28 is pretty feature-packed on the streaming front. Spotify Connect and Tidal Connect support lets you stream to the A28 from within those music services' apps, while the dedicated Audio Pro companion app allows you to access the music catalogues of other services such as Apple Music, Qobuz, Deezer, TuneIn Radio and vTuner, plus any music stored on your local device or a NAS drive. Google Cast and AirPlay 2 are also onboard for easy casting from compatible apps and Apple devices, respectively. The now-pretty-ancient (but perfectly usable) 4.2 version of Bluetooth completes the extensive list.

You can also tie the A28 into a wider multiroom system. AirPlay and Google Cast facilitate group playback with other speakers or devices that also support either of those protocols, while multiroom control is also possible with other Audio Pro speakers from within the app. Audio Pro emerged several years ago as a more affordable alternative to Sonos, so, like its main rival, it has a range of good single-box wireless speakers in its ecosystem too.

There's no denying it — the A28 speakers are impeccably built and finished for their price point. I didn't receive the new walnut veneer finish for this review, but the matte white version (the only other colour available is black). I wasn't disappointed; the white finish exudes class. A supplied set of dark grey fabric grilles magnetically attach to each of the speaker's baffle to help protect the drivers, although I left them off during my time with the A28 as I preferred the striking look of their black drivers contrasted against the matte white enclosures… and I don't live with driver-damaging cats or small children!

The drivers themselves comprise a 1-inch textile dome tweeter and a 4.5-inch woofer per cabinet, driven by 75 watts per channel of Class D amplification. Each speaker has a rear-facing port to aid bass reproduction, which is particularly effective when the speakers are given the solid backing of a rear wall, so consider that during positioning.

One design touch I particularly appreciated was the soft rubber pad on the base of the cabinets, ensuring that both they and the surface they're placed on remain free from scratches.



Audio Pro's claim that the A28 are compact and easy to house certainly holds true: each box is only 15cm wide, 20cm deep and just under 24cm tall, and their combined weight only 6.5kg, making them easy to place on speaker stands or even a solid (that's important) shelf or tabletop.

Your control options are twofold. You can use the companion mobile app for iOS and Android, which is intuitive enough and your only option for navigating music libraries and creating playlists. You can also adjust tone and balance settings and switch inputs.

Alternatively, you have the supplied remote, which, considering the decidedly affordable price tag of the speaker system, is a lot more robust and premium-feeling than I expected. It appears to be machined from a single piece of aluminium and has easily identifiable buttons for selecting inputs, changing volume, powering the system on and off, and accessing five quick-access custom presets. You can assign these presets to specific playlists or music services, for example. Dead handy.

> The A28 never tempted me to make use of its sub output, kicking out a tight low-end that belied its cabinet size

LISTENING SESSIONS

Swapping out my system — the $2,500 KEF LS50 Meta passive speakers, driven by the similarly priced Marantz Model 60n streaming amplifier — for the A28, I was naturally prepared for a 'downgrade' in living room sound for the next week or so. (My expectations of the A28 were high, but not *that* high!) As it turned out, I was pleasantly surprised from the off as the Audio Pros made their presence known, pumping out a generously sized soundstage that filled my modest apartment space and instantly appeared coherent and tonally balanced.

I've been on a bit of a Röyksopp jaunt recently, so my first port of call was to load up a Tidal stream of *This Time, This Place* from the Swedish electronic duo's recently released True Electric album. During music replay, the A28 never tempted me to make use of its subwoofer output, kicking out a tight low-end that belied its cabinet size. If anything, I was tempted to pull out the speakers from my rear wall a bit or reduce the bass level within the app, but I became quickly accustomed to the low-end presence and the speakers' communication of the bassline beat's agile, driving nature. (I should note that the A28 lose an overall sense of solidity when pulled out into a room, so keep them within 30-45cm of a rear wall if you can.)

Keeping with the impactful basslines but introducing some female vocals, I switched to Francine Thirteen's *Queen Mary*, which I actually discovered at the Australian Hi-Fi Show, where it was being played through

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> Dialogue clarity and projection were certainly strengths, beating my soundbar on both fronts

Denon's PMA-3000NE amplifier and DNP-2000NE streamer with a Polk Audio speaker pair at a volume that caused the hotel room to rattle! I couldn't possibly expect the dinky A28 speakers to replicate the same room-shaking effect, and they didn't — but neither did they cower away from the heavy bass drums or indeed allow them to overshadow Francine's gorgeous vocal. The song makes plenty use of the channel-panning effect, and the A28 tracked the movements and conveyed the changes across the soundstage well, all while keeping vocals and the main melodic bassline at the centre.

I turned to the trusted test track *Like a Dog Chasing Cars* from The Dark Knight soundtrack, and that too was nicely communicated by the Audio Pros, which delivered the climaxes and unearthed the general mood of the track. There's clearly a dynamic ceiling for the A28, however. The system couldn't rise to the heights and dip to the lows that I know the track (one of the most dynamically expressive of its kind) possesses. That's not to say the A28's presentation flatlined, but it's the only sonic area I hankered for a bit more in. That said, this isn't surprising for the size of the cabinets and drivers. All that considered, the A28 does little to disappoint.

Remembering the other aces up the A28's sleeves, I connected my phono preamp-toting JBL Spinner BT turntable and plonked down David Gilmour's Rattle That Lock record on the platter, playing the eponymous track. In line with what I heard when streaming, the A28 sounded clean and cohesive in a nicely dimensional soundstage, his vocal and guitar solos conveyed with clarity beneath an enthusiastic bassline.

While I imagine most users will predominantly stream through the speakers, connecting a turntable and hearing how highly listenable it was was a reminder of arguably the A28's greatest strength: versatility. Speaking of which, what was it like with a TV?

I hooked the speakers up to my bedroom TV, where they replaced my modestly priced soundbar and subwoofer package. Dialogue clarity and projection were certainly strengths, beating my soundbar on both fronts, as well as in terms of detail. It easily passed the muster for daytime TV. That said, when watching movies (and I'm a stickler for blockbusters), I must say I missed my subwoofer. The A28's relatively generous bass did its best, but the relatively small woofer can physically only do so much. 'Soundbar killer'? Not on its own. Audio Pro does sell a subwoofer for its various speaker systems, however, its most affordable model, the SW-5, coming in under $500. I haven't tested it, but I would consider it, or another separate sub, if you want to use the A28 for movie night. Perhaps Audio Pro's floorstanding models, the A38 and A48, would better fit the brief with their larger cabinet sizes and twin (and in the case of the A48, larger) woofers.

CONCLUSION

Overall, I enjoyed my time with the Audio Pro A28 more than I perhaps expected to, and it gave me a hugely favourable impression of the Swedish brand. For a very affordable price, the A28 are exceptionally well-built and versatile, and more than justify their humble outlay with a clean, clear and detailed sound. They're an excellent choice for anyone after a second speaker set-up for a smaller room, or a newcomer to the hi-fi scene who wants an all-in-one (or more accurately, all-in-*two*) stereo proposition that is easy to accommodate and which doesn't require any external components.

Max Langridge

SPECS & CONTACT

Warranty: 2 years
Power: 2 x 75W
Frequency range: 45-20000Hz
Drivers: 1-inch textile dome tweeter, 4.5-inch woofer
Inputs: Line-level RCA, optical, HDMI ARC, Bluetooth, wi-fi
Outputs: Sub
Dimensions (HWD): 23.8 x 20 x 15cm
Weight: 6.43kg (pair)

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Rega Brio Mk7

Integrated Amplifier

- Solid, punchy and exciting sound
- Good-quality phono stage and DAC
- Meaty bass

- Plasticky feel to controls
- Volume adjustment with headphones
- No USB input

RRP **$1,699**

Rega's Brio has been one of the hi-fi industry's most reliable, affordable stereo amplifier recommendations for longer than I care to remember. The original launched in 1991, and every generation since has been a frills-free analogue design, with priority given to high-value sound and a simple feature covering the basics.

The new Brio Mk7 doesn't deviate much from that well-established path, but acknowledges the changing times by adding digital inputs. Less welcome is a price increase that pushes this amplifier into the next class up from its traditional, more affordable home, putting it against some tough competition.

DESIGN & BUILD

Rega has persisted with the convenient half-width casing of the previous generation but changed the front and rear panel designs to match the styling of its

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current product range, and the result is neat enough.

That said, placing the old next to the new, I find myself preferring the metal controls of the last-gen model over the Brio Mk7's plasticky alternatives. I'm not a big fan of the new Brio's cheap-feeling plastic rear panel either, especially given the amplifier's increased price.

Elsewhere, there is no issue with the swap from a front panel-mounted 6.3mm headphone output to a 3.5mm; most price-appropriate headphones are terminated with this socket anyway. The new remote control is fine too, being well-designed and simple to use, if not particularly stylish.

Much the same description applies to the amplifier as a whole. Generally, the Brio Mk7 feels like a functional tool designed to do a job rather than something to impress friends with (until you listen to it, that is. But more on that later!)

The big news here is the addition of digital inputs, which comes to the company's mid-range model for the first time. While previous generations have remained all-analogue, the advent of the Elicit Mk5 in 2022 and then the Elex Mk4 in 2023, both of which included DACs, shows not just a nod towards customer demand but also Rega's satisfaction with including digital circuitry that doesn't compromise the overall audio quality. The Brio Mk7 offers the choice of single coaxial and optical connections, and is compatible with PCM files up to 24-bit/192kHz. DSD is not on the menu, nor is there a USB input. While the lack of these things is a little disappointing, I don't think either is particularly a deal breaker at this price level.

It is important to remember that the Rega's main competitor, the Arcam A5, is no better equipped in these respects, though it does include a Bluetooth input, which the Brio doesn't have. On the analogue side, the Rega has a moving-magnet phono stage plus three single-ended line-level inputs, which, while not exactly generous, should be fine for most hi-fi setups.

Take a look inside the Brio Mk7 and you will find a re-laid circuit board to improve performance and reduce distortion. The engineers have clearly worked hard to improve the isolation between the sensitive phono stage and the higher current sections of the amplifier. In Rega's words, 'a second raw power supply is implemented to provide further isolation between output stage and the driver stage/line and phono amplifiers. This improves the isolation between high and low level signal stages of the amplifier. Higher specification MUSES operational amplifiers have been used in the line, DAC and phono amplifier.'

The Brio's power output remains the same as the previous model at 50 watts per channel into an 8-ohm load, rising to 72 watts as impedance halves. While the Brio Mk7 is no powerhouse, these are perfectly decent figures that mean it will be able to drive most price-compatible speakers without issue.

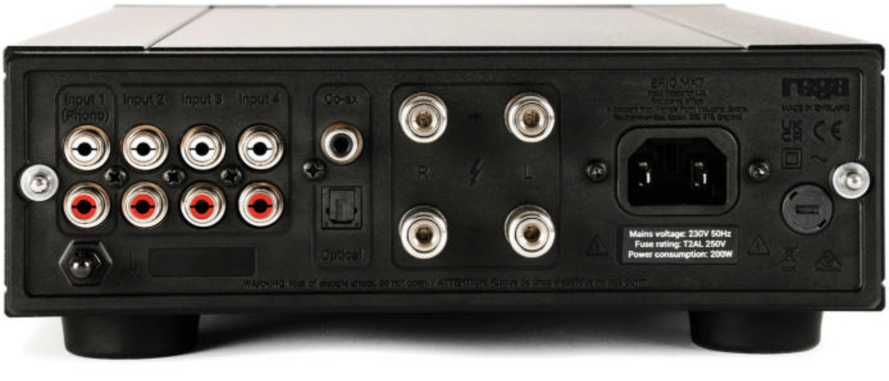
Rega has built a switchable auto-standby function into this Brio, where it goes to sleep after around an hour without an input signal. It's a neat touch, but can be turned off if you want to keep it fully warmed and ready to go. Speaking of warm, if the amplifier reaches a temperature liable to cause internal electronic damage, the thermal protection system kicks in to disable the speaker output. This is indicated by the front panel's 'Mute' LED illuminating and the 'Input' LED turning off.

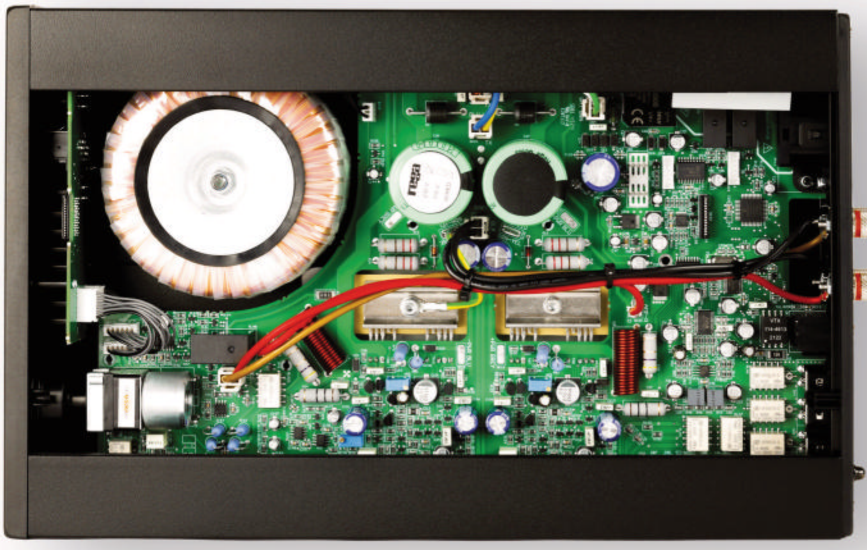
While for this review the Brio Mk7 spends time in a reference system that includes high-end sources such as the Naim ND555/555 PS DR music streamer and Technics SL-1000R, as well as ATC's SCM50 speakers, it's important to pair it with more price-appropriate partners too, so in steps Rega's Planar 3 RS Edition turntable package and the Cyrus CDi CD player, with KEF's LS50 Meta and PMC's Prodigy standmounts 1 at the helm.

LISTENING SESSIONS

Any doubts about the Brio Mk7's ability to compete at this slightly higher price category prove unfounded. Judged by price standards, it is a hugely accomplished performer that puts clear air between itself and its predecessor, which launched back in 2018 for a fair few hundred dollars less. Comparing the two, it doesn't take long to appreciate the new model's greater insight, organisation and dynamic expression.

The Brio Mk7 has a bold presentation, one that brims with confidence and substance. As it plays Quincy Jones's Back On The Block album, it is hard not to be impressed by the Brio's taut, grounded, low-frequency performance and its ability to deliver dynamic contests with conviction. It has a firm grip of rhythms, too, giving the music a solid foundation





and a great sense of momentum. Detail levels are high — comparable with the aforementioned Arcam — and all that information is presented in a neat and musically cohesive way. There is never any doubt as to the emotion any given artist wants the listener to feel. This has long been a strength of Rega's Brio — and wider amplifier — line-up, and this Mk7 version just reinforces that tradition.

Indeed, zoning in on that Rega vs Arcam comparison a little more, it's a tough choice — their presentations are markedly different. The Rega is the more energetic and dramatic performer, capturing the excitement in music brilliantly, while the Arcam takes a more measured approach, prioritising articulation, space and refinement while still delivering highly entertaining results. The two are so close in ability that your preference is likely to come down to your system and taste.

Move your attention up the frequency band, and you will notice that voices come through with clarity and natural warmth intact. This little amplifier may have a relatively modest power output, but you would never know it from the way it thumps out transients when the music demands. It can play at relatively high volume levels with composure too, and doesn't leave me feeling short-changed, even with low sensitivity speakers such as the 85dB/W/m ATCs in this 3 x 7 x 5m test room.

The Brio Mk7 stays firmly on track when asked to play a large-scale classical piece such as Holst's *Mars*. It has the muscle to deliver the music's savage swings with conviction, yet retains enough finesse to render instrumental textures or the low-level acoustic clues that define the size of the recording venue well.

Tonally, it sounds fairly even and full-bodied. While this is a direct and front-footed performer, there is still enough in the way of refinement and top-end sweetness to prevent it from becoming overly fussy about poor recordings or less-than-perfectly-matched partnering equipment. Stereo imaging is good, too, exhibiting a pleasing sense of layering and the ability to keep instruments locked in place even when the music becomes complicated. It doesn't generate the most expansive of soundstages, but it still does enough to convince.

The new DAC module is a good one. It retains the enjoyable character heard through the analogue stages, sounding lively and forthright across a wide range of material, from Nick Cave and Warren Ellis's The Road OST to Joe Jackson's Body And Soul set. There is a pleasing balance of analysis and entertainment on offer here. This digital module is certainly among the best I have heard integrated into an amplifier at this level.

It is less of a surprise to find that the phono stage is talented, given that Rega has been built on a foundation of producing great record players. The circuit is reasonably quiet in terms of hiss and hum, and surprisingly capable. It communicates musical energy well, which is pretty much all you can ask for from such a design. The brand's expertise in terms of phono stages and record replay shines brightly here.

Maintaining the high standards is the headphone output, which works well with the relatively modest Grado SR325x and much more ambitious Austrian Audio The Composer. My only complaint here is that there isn't much in the way of usable travel on the motorised volume control; the level can easily go from 'quiet' to 'way too loud' with the turn of just a few degrees.

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CONCLUSION

Rega has taken a real step forward with its iconic Brio here. The jump in price could've posed a problem had the improvements over the previous generation been minimal, but that hasn't turned out to be the case. Indeed, it's a strong all-rounder that is made all the more appealing by its great-sounding digital section. If you are looking for a top-class integrated anywhere near this price level, the Brio Mk7 should be in the running.

You will have to be a little patient, mind you, as according to Rega's Australian distributor, Synergy, stock isn't arriving until early August. ***Ketan Bharadia***

SPECS & CONTACT

Warranty: Manufacture defects: Lifetime / parts & labour: 3 years
Power: 50W per channel (8Ω); 72W (4Ω)
Power consumption: 200W
Inputs: 3 x line-level, phono, optical, coaxial
Outputs: 3.5mm headphone
File support: up to 32-bit/192kHz
THD & noise (A-weighted): 0.005% at 1kHz
Dimensions (HWD): 7.9 x 21.6 x 36.5cm
Weight: 4.9kg

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Marantz Grand Horizon

Wireless Speaker

+
- Vast connectivity
- Weighty, room-filling sound
- Luxury look and feel

−
- Poke-don't-drag volume ring operation
- Expensive
- Could be more dynamically expressive

RRP **$9,500**

As is quite clear from the images you see before me, Marantz's Grand Horizon isn't your average wireless speaker. Indeed, its 'Grand' moniker, which distinguishes it from its smaller, more affordable Horizon sibling, represents not only the company's ambition here but also the size (50cm tall and wide), weight (21kg) and price ($9,500) of the speaker.

There's no getting around it; the Grand Horizon is a beast, albeit a beautiful one. And as the most expensive wireless speaker I have come across, carrying a figure that could buy you a whole system of modest hi-fi separates, it has its work cut out to prove its value and rebut its instant impression of extravagance. Can a single wireless speaker really justify a near-$10k asking price?

Of course, the audience for a hi-fi component system will be very different to the one considering an all-in-one solution like the Grand Horizon, which by nature offers everything you need in one compact (in relative terms!) box — no trails of connecting wires, complex equipment pairing or much room positioning to think about. Just simple, straightforward music delivery, hopefully with somewhat comparable sonic talents.

DESIGN & BUILD

It's inherently difficult (impossible even?) for any single unit costing this much to nail perceived value, but Marantz has given it a jolly good go. The company's goal for the two Horizon models was for them to embody 'modern musical luxury', and on the aesthetic front that starts with the circular base, which is made out of natural marble stone and accounts for a good chunk of the speaker's considerable weight. Which is a good job really as a baseless Grand Horizon can be wall-mounted. Never before have I had to ask for help to lift a wireless speaker onto a tabletop due to its heft. My advice for transportation? Keep the Grand Horizon in its handle-toting cloth casing until it's in position, before then peeling it off.

Marantz says it sampled more than 25 materials before deciding on the beautiful marble slab sitting before me. Move up to the circular main chassis, which isn't spherical as such, being only half as deep as it is wide, and the quality of the construction is just as palpable. The woven fabric wraparound hugging the chassis tightly (although not so tightly that you can't pinch it) has a custom weave pattern with metallic sparkle flecks through it, looking very smart on my 'Midnight Sky' (dark grey/black) review sample. Light grey/silver 'Moon Ray' and gold/beige 'Champagne' finishes are also available. This fabric is produced in Austria and is, as you would expect, acoustically transparent.

But stealing the spotlight is what Marantz calls its 'AuraControl capacitive UI' — a 360-degree touch-control ring that borders the woofer's gold trim and beautifully illuminates it with 100 diamond-shaped LED indicators. That halo of light is, when in use, essentially a volume and playback control bar — and another implementation that took over 20 prototype versions to settle on. Initially, its operation stumped me, and also my colleague who was reviewing the smaller Horizon. We both assumed, based on similar capacitive implementations in other speakers, that sliding a finger from one point on the ring to another would increase/decrease the volume. Instead, you must place your finger on the ring where you would like the volume to settle (at 9 o'clock for pretty low volume, for example) and, after a moment, the LEDs meet your fingertip and the volume change occurs. It's certainly an "oooh" moment, though I must say I would've preferred the more intuitive drag approach. Thanks to proximity sensors, too, the LED strip lights up automatically as you approach it — another neat touch.

To play/pause music, you simply tap the strip's bottom (6 o'clock) once; a double-tap skips forwards a track while a triple-tap skips backwards. This action mostly behaves itself, although as with more or less every integrated touch control I have encountered on hi-fi components, it isn't perfect, sometimes requiring you to repeat your action. (An alternative control means accommodates those who prefer a more hands-off approach — more on that shortly.)

Ultimately, I applaud Marantz's efforts to present the heir of luxury this lofty price point demands. The Grand Horizon is more of a showpiece than any other of its kind I have tested.

TECHNOLOGY

Without X-ray insight into the speaker's internals, you could still very well guess the placement of the Grand Horizon's eight drivers (and neodymium magnets). You have a one-inch silk dome tweeter and three-inch paper pulp midrange driver on each side, another one-inch tweeter flanked by another two three-inch midrange units at the top, and an eight-inch woofer (also made of paper pulp) that you can more or less see if you peer down behind the front Marantz-badged part of the enclosure. This patent-pending transducer configuration inherently facilitates a widespread soundfield, and with the drivers somewhat angled away from the centre of the system, and complemented by DSP algorithms (also patent-pending), the Grand Horizon offers, Marantz claims, "the most spacious signal reproduction from a singular all-in-one speaker on the market".

Driving them is a generous amount of firepower — 370 watts — from Marantz's next-gen GaN FET (Gallium Nitride Field Effect Transistors) switching amplifiers, of which the brand says: 'Compared to traditional silicon transistors, it offers significantly lower on-resistance, meaning it loses less power during switching. Its fast switching speeds ensure more control over the audio signal, enable high-frequency operation and deliver lower distortion and heat. Plus, its compact size frees up more space within the overall design for other essential audio components. The result is a superior listening experience achieved with speed and efficiency.'

My colleague reviewing the Horizon, Jez Ford, did some digging into GaN and had this to say about it...

'If you haven't yet encountered GaN, you can expect to hear much more of it in our hi-fi futures, as it provides an alternative to silicon in transistors. GaN allows Class D amplifiers to do their PWM switching at far higher frequencies (typically 800kHz for GaN, about double that possible with silicon Class-D); among its advantages, this allows a simpler filter to be used, almost eliminating phase shifts in the audible band and up to 30kHz. Early examples have had their sound compared with low-wattage Class A or even single-ended valve amplifiers. One potential brake on GaN development may be that gallium mining is dominated by China and Russia — happily we have some of the stuff here in Australia, too, with several local companies already feeding the GaN transistor market.

Marantz hasn't leapt onto GaN for its high-end amplifiers, and in a recent online briefing the team indicated that it considers the Purifi 'Eigentakt' circuits used in its recent Model 10 amplifier to be well superior to the Horizon's power circuits. But what if Purifi itself were to implement GaN, I wondered! So I asked Purifi about that...

"While GaN FETs offer faster switching speeds — approximately twice as fast as traditional silicon devices at 150V —

their impact on distortion reduction in typical home audio class D amplifiers is incremental, given the extensive refinements we already achieved in our Eigentakt designs", replied Purifi's Claus Neesgaard from Denmark. "We believe that GaN's true advantage lies in high-voltage, high-power applications (above 200V), where silicon FETs struggle, making GaN the practical choice for demanding scenarios such as 1kW+ amplifiers. Consequently, our approach is to adopt GaN technology judiciously, leveraging its strengths in areas where it truly enhances performance rather than relying on it as a mere buzzword. In any case, some truly exciting Purifi developments lie ahead."'

CONNECTIVITY

Like pretty much every networked component from Marantz (and sister brand Denon for that matter), the Grand Horizon uses the Denon-built HEOS wireless music platform, which is a gateway to several music services, including Spotify, Tidal, Amazon Music, Deezer, Pandora, TuneIn, SiriusXM, iHeartRadio, Mood:Mix and SoundCloud — all controlled via the companion app. The HEOS platform also facilitates multiroom setup and playback (at the cost of transmission being limited to 16-bit/44.1kHz), while either Horizon model can be paired with another to deliver a two-speaker stereo presentation.

AirPlay 2, Spotify Connect, Tidal Connect, Bluetooth and the recently launched Qobuz Connect are also part of the wireless connectivity picture. And if you're looking to connect an external source, there are RCA, optical and HDMI (with Dolby Atmos support) inputs, as well as the option to hook up USB-C music drives. These sockets are a little tricky to see and access owing to their placement within a recessed panel at the Horizon's rear, but hopefully once you've connected your sources and/or Ethernet cable (there is also wi-fi), you won't have to do it again.

Really, the Grand Horizon's feature set is as rounded as its chassis, and the great thing about established software systems such as HEOS is that it will likely be updated down the line when new streaming apps or protocols come along (so long as the product's hardware chip supports it, natch). So your Grand Horizon could, in a way, get even better in the future.

The app is worth playing around with when you first sit down with the Grand Horizon, if only to ensure the default system and playback settings are to your

A MORE VIABLE HORIZON

On the features, aesthetic and controls front, the Grand Horizon shares plenty in common with the smaller, more affordable Horizon, from its luxurious materials and illuminating 'AuraControl' volume ring to its wealth of physical and streaming connectivity and even its sonic character. But of course, there are points of differentiation that justify the price gap.

While the bigger sibling is, well, bigger and heavier, the Horizon is hardly dinky, being 36cm in diameter and weighing 12.5kg. Naturally, the Horizon outputs less power than its sibling (310W), while other variances include the quoted maximum SPL of 104dB continuous and 114.5dB peak for the Horizon, versus a significantly higher 111dB/122dB (remembering that 3dB is a doubling of effective acoustic or electrical power), and also the low frequency response, quoted to 30Hz at -3dB and 22Hz -10dB for the Horizon, versus 28Hz at -3dB, and 18Hz at -10dB.

That dark fabric around the outer circle conceals five drivers this time: three 5cm (2-inch) mid-cones bravely described as 'wideband', and a pair of one-inch tweeters for high frequencies. Then in the centre is the large 16.5cm (6.5-inch) bass driver behind that frontplate.

I doubt that anyone swayed by the Horizon's parallel visual charms will be less than satisfied by its aural ones. Those wedded to the merits of a traditional hi-fi system should not trade that idea for the Horizon: there's plenty that a proper hi-fi system would deliver over and above the Horizon's circle-bound drivers. Stereo imaging is minimal from any distance, depth of soundstaging likewise; the performers are not truly summoned to life in your room in the way a good hi-fi system might achieve. But for the upper wireless speaker market where this unit sits, its sound is good, strong, powerful and suitable for small-to-medium-sized rooms.

I would assume that anyone shopping for such a speaker has sufficient money to expend on Marantz's "luxury" line of "beautiful objects", and I can reassure these well-heeled consumers that the Horizons also come with a strong dose of the company's innate focus on sound quality. ***Jez Ford***

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liking. You may well fancy flirting with the integrated My Mirage setting, too. This EQ tool can individually boost or reduce certain sonic elements — more specifically, 'warmth', 'spaciousness' and 'clarity' — via a simple slider. Adjusting each initiates a specific light display pattern, which is another lovely use of the LED touch panel.

I recommend you check that your Grand Horizon has the correct EQ position setting, depending on whether it is placed near a rear wall, in a corner, or out in the open. Oh, and just double-check that the 'Sound Mode' (found within the EQ menu) is set to 'Auto' (the default option, labelled as "balanced sound for all inputs and formats") as opposed to 'Sound Master' ("tuned for critical listening by the Marantz Sound Master") — puzzlingly, the latter somewhat muddies and thins the presentation, making it rather unlistenable.

LISTENING SESSIONS

Thankfully, the preferred default delivery is listenable! I queued up *Three Hours* by Aldous Harding and her producer (and longtime PJ Harvey collaborator) John Parish, their contribution to the 2023 Nick Drake tribute cover album Endless Coloured Ways.

It's an ethereal, electronic adaptation — a far cry from the breezy folk tune and finger-picking technicality of the original — and the opening organ drone, steady drumbeat and agile bass line provided a satisfying taste of the speaker's bass presence, revealing the benefits of combining an eight-inch woofer with a reasonably sized, solid enclosure. The bass guitar and tambourine were easily discernible as the layers of instrumentation built on top of one another, and while I knew there was more texture to both recorded instruments that the Marantz couldn't quite dig up here, the delivery was coherent and communicated the tone of the piece well.

The two folky vocals were distinctly layered, the Marantz offering the spaciousness and detail so that each could be appreciated both independently and in partnership. Despite that space, a sense of cohesion didn't elude the delivery as the celestial electronic effects came in with purpose to give the cover track an apocalyptic mood (which, by the way, is echoed in the imagery of its accompanying five-minute film: https://www.youtube.com/watch?v=P1EuZcw05mU).

The Grand Horizon managed to capture the atmosphere of the room in which Peter Broderick recorded *Our Future in Wedlock* (a suitably titled work considering it was commissioned for a wedding!), and again showed it can keep tabs on various musical strands without becoming confused.

Its weight is impressive for a wireless speaker. As I turned to Bon Iver's *THINGS BEHIND THINGS BEHIND THINGS*, his familiar fusion of layered synths, glimmering guitars and baritone vocal sounded lush and full. There's no lack of thwack to the percussion later on in the brand-new SABLE fABLE album, either.

There aren't many one-box speakers that can fill a room easily, without audible distortion creeping in when the volume gets pushed, yet the substantial driver array's output far belies the speaker's physical size, and when I hit the 75% volume mark — more than loud enough in my 9m by 4m room — it admirably held its cool, resisting sounding overstretched.

The Marantz didn't prove very forgiving of low-quality or compressed-sounding recordings (Band of Horses' *Lights*, to give one example). And I couldn't help but feel that a final ingredient was missing: the dynamic elasticity key to truly *mastering* the ebb and flow — the rhythmic essence — of a piece of music.

CONCLUSION

Still, the Marantz Grand Horizon ticks a lot of the boxes demanded of modern music machines today. While the case for a separates system (or a stereo pair of active speakers) is strong at this price level when it comes to performance, if you are set on a one-box solution with a statement design and room-filling sound that go beyond what more affordable alternatives can offer, the Grand Horizon has plenty of appeal.

Becky Roberts

SPECS & CONTACT

Warranty: 5 years
Power: 370W
Drivers: 3 x 1in tweeter; 4 x 3in wideband; 8in woofer
Frequency response: 28Hz to 20kHz (+/-3dB), 18Hz (-10dB)
SPL: 111dB
Connections: RCA, optical, USB-C, HDMI eARC, Ethernet/wi-fi, Bluetooth
File support: 24-bit/192kHz PCM, 5.6MHz DSD, Dolby Atmos
Streaming: AirPlay 2, Spotify Connect, Tidal Connect, Qobuz Connect, Amazon Music, Deezer, Pandora, TuneIn, SiriusXM, iHeartRadio, Mood:Mix, SoundCloud
Dimensions (HWD): 49.3 x 25.5 x 52.9cm
Weight: 21.3kg

Distributor: Masimo Australia
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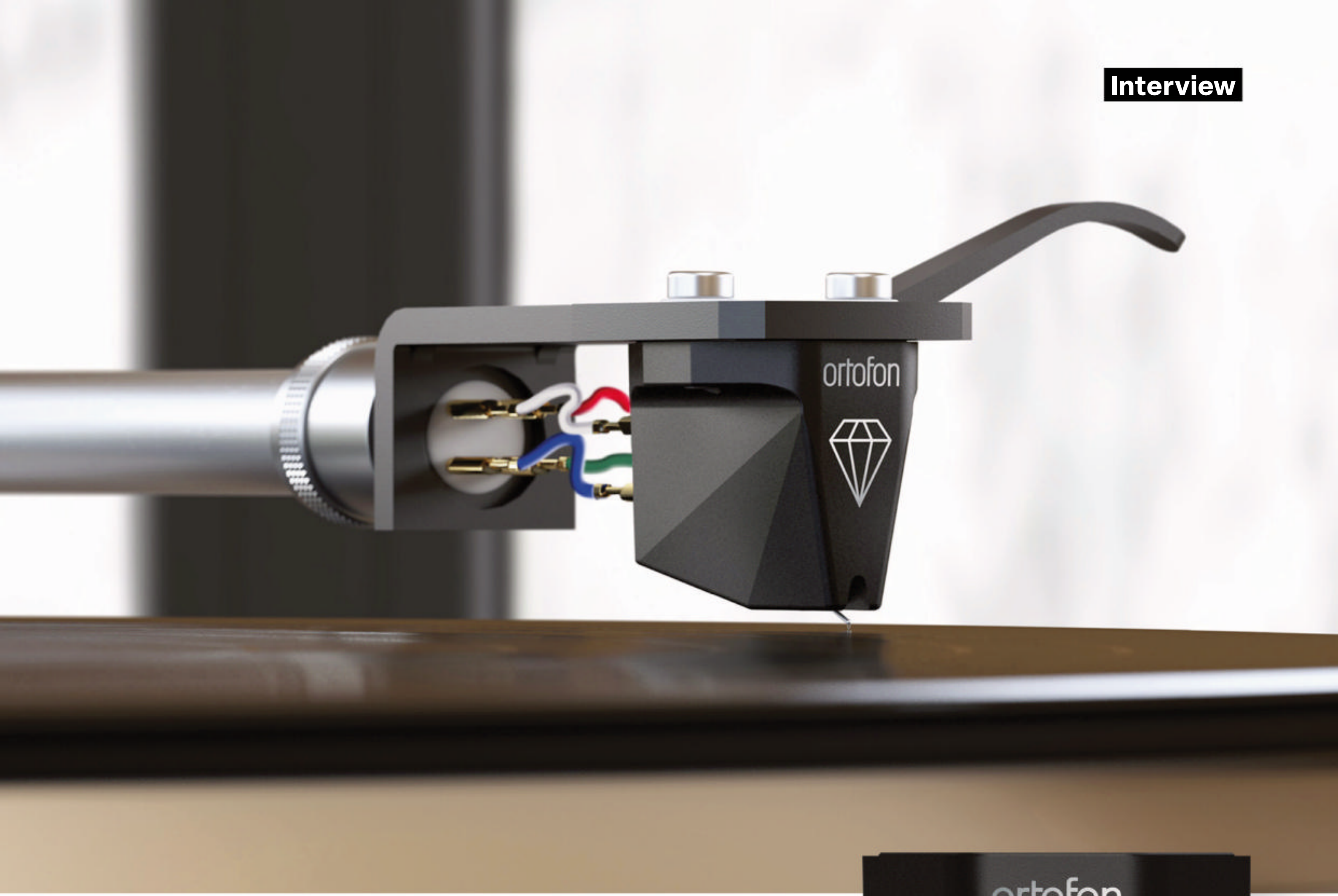

A quartet of quintets

Ketan Bharadia travels to Denmark to hear Ortofon's latest Quintet moving-coil cartridge series and speak to the man behind it...

Ortofon has released the replacement for its long-running Quintet series of moving-coil cartridges. The Danish cartridge specialist's new MC X range consists of four models — the MC X10, MC X20, MC X30 and range-topping MC X40, which based on European pricing should range from roughly $575 to $1,850. Every model shares the same generator system and housing, with their differences coming down to the type of stylus tip. The MC X40 flagship uses a boron cantilever instead of the aluminium one found elsewhere in the series, too.

> **First impressions were hugely positive, with each offering improved detail and finesse over the step below**

Ortofon's engineers started with a fresh sheet of paper and have worked hard to push performance standards. The foundation of the MC X models is a new honeycomb stainless-steel core to which the generator and housing attach. It is made using Metal Injection Moulding technology, and reminds me a little of the design used in Ortofon's futuristic, multi-thousand-dollar MC-90X moving-coil design. Each MC X cartridge features a newly developed magnet system and hand-wound coils made of ultra-thin, high-purity silver wire, too.

Ortofon hand-builds every model and even makes most of the parts on-site, including the rubber used for the cartridge's suspension. This level of control ensures quality and allows the company to more easily optimise performance.

Each model measures remarkably consistently, from the sensible 0.4mV output level to the conventional 2g recommended tracking force.

They aren't particularly heavy either, at 8.6g, so they should work well in a wide range of tonearms. Electrically, a typical phono stage with an MC input loading of 100 ohms should work just fine.

This consistency also reflects the cartridges' sound. I was fortunate to have a quick listen to all four models at Ortofon's

ortofon
X20

ortofon
X10

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X30

ortofon
X40

listening room in Næstved, Denmark, and my first impressions were hugely positive, with each offering improved detail and finesse over the step below.

The company has an impressive reference system fronted by a Technics SL-1000R record player, feeding the phono input of a Mark Levinson No 523/No 534 pre/power amplifier combination, which drives Focal Scala Utopia Evo floorstanders.

I started with the entry-level MC X10 and, despite being unfamiliar with the system and room, was surprised by just how good it sounds for the money. This cartridge sounds cleaner and more detailed than I expected, delivering Eric Clapton's Unplugged set with finesse and good dynamic expression.

Changing to the MC X20, upgrading from the 'standard' Elliptical stylus tip to the Nude Elliptical one, brings improvements. It sounds more detailed but also, more importantly, delivers a more mature presentation that digs deeper into the recording. There is greater finesse here, too, as well as a more subtle rendering of instrumental and vocal textures. Simply put, the MC X20 provides a more grown-up and composed performance than its junior sibling, justifying its price premium.

I didn't have a huge amount of listening time, but my impressions are that the model-up MC X30 might just be the sweet spot of the new range. The technical change of the stylus tip to a Nude Fine-Line profile may not seem profound, but the resulting sonic improvement certainly seems to be. You will need a suitably talented turntable, of course, and a system that has the required transparency, but given these it is hard to argue the value that this model brings.

> The MC X30 shifted my attention from the mechanics of hi-fi reproduction to the quality of the music

I noted significantly improved clarity, subtler dynamics and a greater sense of naturalness. This is a less showy performer than the series' more affordable cartridges, one that prioritises insight, refinement and control. This is the first model in the range that shifted my attention from the mechanics of hi-fi reproduction to the quality of the music being played. Indeed, anything that puts the spotlight firmly on the music and emotion gets my vote.

So, where does that leave the range-topper? In a system as capable as this, there is no doubt that the MC X40 digs even more out of the record groove. It renders a notably larger soundstage than the MC X30 and resolves even more detail. The change of stylus profile to a Nude Shibata, and the cantilever material from aluminium to the more rigid Boron, provide an obvious performance improvement.

While the relatively short time I spent listening to the cartridges leaves me unsure as to whether it matches the MC X30 in terms of overall musical cohesion and engagement, there is no doubt that the reference model is the more informative and even-handed performer. It certainly paints sound with a finer brush, and I suspect that will be enough to get many people to tap the card.

Having been impressed with what I had heard, I took the opportunity to sit down with Peter Wieth Hjordt, Ortofon's Product Director and the driving force behind the new designs…

Ketan Bharadia: What is your role at Ortofon?

Peter Wieth Hjordt: I work on both the commercial and technical side of Ortofon, which gives me the ability to bridge those two worlds and help the company make products that the customers, distributors and retailers are actually asking for, rather than just what we think they should buy. I also work with the engineering team, driving the development of new products.

How did you first get started in hi-fi?

I first got interested in the early 1990s when I went into the high-end department of a local hi-fi shop. I had saved a few bucks and was ready to buy something, but I couldn't really get a proper answer to my questions. So, afterwards, I contacted the person in charge of the high-end section (who wasn't in when I visited) and ultimately ended up working there.

Over the next years, I studied so that I could fully understand the technical aspects of hi-fi while progressing through numerous retail shops to distribution, and then ultimately came to Ortofon.

What are the relative merits of moving-magnet and moving-coil cartridges?

The big advantages of moving-magnet cartridges are the replaceable stylus — really good if you damage it or wear it out — and their higher output levels. They are easier to make, and the process can be automated. The swappable stylus also means that it is easy to upgrade to the performance of models further up the range. The high output level of moving magnets also means that there is less of a demand on the partnering phono stage in terms of gain, noise levels and distortion.

Moving-coil cartridges have to be rebuilt if you damage the stylus, so it isn't possible to repair or upgrade them in the same way. However, they have a lower moving mass, and that is critical to track the detail and dynamics of the signal in the record groove. In terms of sound quality, provided your turntable and phono stage are good enough, moving-coil cartridges will tend to sound better.

ortofon
X40

What were the design priorities for the new MC X range?
With all the development work we have done in recent years, I knew right from the beginning that we could get better channel balance and a wider sound separation.

We could make big improvements in the magnet system as well as optimise the rubber damper (suspension) material. A lot of development has been done on rubber compounds over recent years, and I knew we could get better results.

All of this makes it possible to take performance to another level over the old Quintet range.

Stylus shape is the main differentiator between the various MC X models. Why is it so important, and what is the hierarchy?
The stylus is in contact with the sides of the record groove, not the bottom. The shape of the stylus dictates the amount of contact it makes and how accurately it can track the undulations. That's why narrower stylus profiles usually sound better.

The most basic option is called Spherical, followed by Elliptical, both mounted on a titanium shank (that is then attached to the cantilever). The next step would be to get rid of the shank and mount the diamond directly to the cantilever, which we call 'Nude'. In such a design, the Elliptical diamond will be narrower in profile, giving a better sound. Fine-Line and then Shibata are next.

At the very top is a profile like our own Replicant 100, which has such a narrow shape that we haven't found a way to make it any better without turning it into a cutting head!

Cartridges are a mature technology. Where do you think improvements are possible?
It's a tough question. There are many areas where we are focusing. We can improve the cantilever by introducing a more rigid material, such as diamond, but, of course, that is limited to only the most expensive cartridges.

Introducing a boron cantilever in a moving-coil design cartridge priced below £1,000 [roughly $2,000], as we have done with the new MC X40, gives some of the benefits, and I think that's pretty magic. It allows us to deliver a high-end performance at a more affordable level.

Instead of using an extruded aluminium core and machining afterwards, making one using MIM (Metal Injection Moulding) and stainless steel, as we have with the new range... that is next level. With this production method, new shapes and ways of designing the structure open up the possibilities. Also, refining the rubber compounds used in the cartridge suspension will make a huge difference.

What system do you have at home?
My main deck is a Technics SL-1210GR. I also have a Mark Levinson No 331 power amplifier and Revel Performa F328 Be floorstanders. Having just sold my preamp, I am in the market for a new one. It will be dangerous for me to go to the Munich High End show and see what is there!

What do you think the high-end Ortofon cartridge of 2050 will be?
That's an interesting question. If we are looking at the same way of construction and sticking with the MC principle, I think we will have new, better ways of doing the magnetic system and suspension. I'm sure there will be different materials and new alloys, too, as well as advanced AI simulations that help optimise the performance of every part.

Sights & sounds from the Australian Hi-Fi Show, Sydney 2025

Three days of Sydney sunshine complemented the sunny sounds emerging from four floors of the Australian Hi-Fi Show 2025 in April.

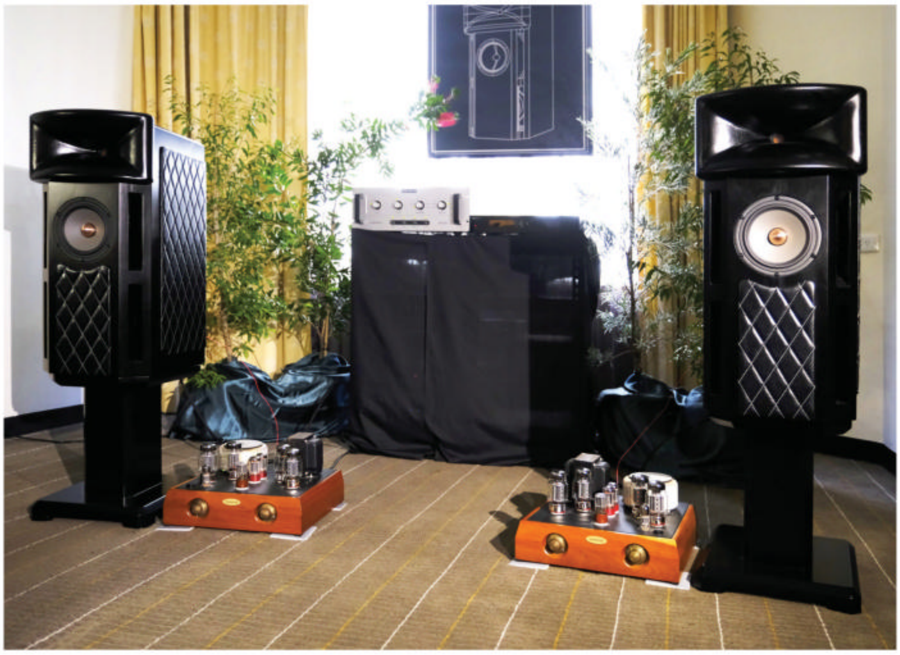
Variety of delivery was one hallmark of this year's event: you could hear half-million-dollar hi-fi systems next to set-ups under $10,000, and compare the sound of traditional valve amplifiers with that of new-age sculptured wireless speakers, home cinema and more.

And whenever your ears needed a break, the show's location in downtown Haymarket, next to Sydney Central Station and Chinatown, brought as many culinary choices out in the sunshine as there were sonic ones back in the hotel. In addition to the usual 'Best Sound of Show' discussions, the results of which are in this report, I overheard many deciding on their vote for the best local momos and gyoza.

But here, I'll focus on the sights and sounds of the show, going room by room, where among the major international brands you could hear a great many Australian companies showing once again what globally impressive strengths we have here in Australia in both audio and audio-visual equipment.

See you in Sydney next year!

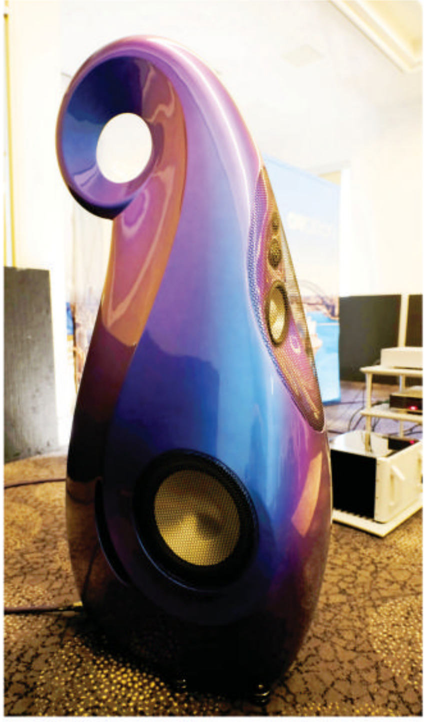
Jez Ford



SPECTRAFLORA

From Inverleigh in Victoria, Spectraflora demonstrated the extraordinarily deep soundstaging available from its Celata 88 speakers, loaded with their patent-pending Dynamic Waveguide and push-pull slot-loaded subwoofer configuration. While the baffle holds the one-inch compression driver (with an oversized 52mm voice coil and mineral-loaded ketone polymer diaphragm) and a seven-inch graphene-coated magnesium mid-bass cone, there are two further eight-inch woofers inside which drop the 91cm-tall speakers' response to 33Hz at -3dB.

The pair playing was black-stained with stunning diamond-stitched leather on the baffle and sides, with the waveguide in Northern silky oak. On display were other finishes — one natural, and one natural with cherry leather and a red ironbark waveguide from wood salvaged from a former WWII Royal Australian Air Force base in Dubbo, New South Wales. So you can get a bit of history with your $38k Celata 88!



VIVID AUDIO

Avation presented a room of loudspeaker sculpture by Vivid Audio with Laurence Dickie's innovative designs, which are entirely engineering-led, their curves created to bring perfectly transparent, natural sound, free from colour, resonance and reflection. On display to one side were the Kaya 90, S12 and C35, but upfront and glorious in a deep blue that shone purple under the lights were the latest Gaya G1 Spirit, proving themselves worthy of their pinnacle position in the range. This is a true four-way system with five separate drivers, including reaction-cancelling bass drivers supporting the three-way front baffle in this 1.6-metre marvel of loudspeaker art.

The Gayas were driven by PS Audio's Bascom H. King-designed M600 power amplifiers, with a Bricasti M21 DAC keeping the signal path smooth via its delta-sigma and ladder DAC PCM conversion.

All in all, a combination of visual and musical beauty to behold, right by the show's entrance.

MARCH AUDIO

March Audio brought not only its award-winning Ukkonen (Finnish for 'thunder') floorstanders over from Western Australia but also a new smaller pair of towers called the Kuoro (Finnish for 'choir' or 'chorus'). These 90cm-tall floorstanders use the smaller Purifi 6.5-inch driver from its Sointuva standmounts but doubles this up and supplements it with the latest Purifi tweeter samples with an aluminium dome and a new waveguide for directivity, delivering a brighter and more open sound, says Alan March, as well as a bass response which is within 1.2dB of nominal at 50Hz and down to 37Hz at -3db. You can expect their price to be around $8,500 when they go on sale.

WINNER

BEST SOUND

FOCAL/NAIM

Westan Australia brought the remarkable Focal Diva Utopia speakers to their big room on the Ground Floor, with Melbourne's Premium Sound store working the room and clearly living up to their name, given the votes that stacked up for this room to give it the 'Best Sound of the Show' win.

Yet this was an unusual system — no supporting stack of electronics is required for these streaming active Focal Diva Utopia speakers, though they were given the slight sprucing of Atlas power cables. Otherwise, the Divas worked entirely alone to deliver a gorgeously lush rendition of HAEVN's *We Are* (symphonic version), and a thrilling delivery of Annie Lennox's *Georgia On My Mind*, her vocal hovering in space between the two lone floorstanders.

Say hello to the ultimate modern high-end stereo system, their integrated streaming smarts, amps and impressive driver arrays impressing visitors with their solo performances.

The synergy of active speakers is obvious, but few have attempted it at this lofty level: the Focals prove the concept holds impressively true at the highest level.

MICROPHASE AUDIO DESIGN

Company head and designer Jean-Marie Liere was on hand with his array of M.A.D. cabinets made from inert marine-grade birch plywood handcrafted in Australia with bespoke drivers, including drivers often hidden away, side or rear-facing. Key for demonstration were the latest standmounts, the Sat Mk3.3 (the .3 indicates the latest crossover tweaks). Each 25cm-tall cabinet holds three Audax-sourced drivers: the time-aligned tweeter, a 13cm paper-membrane full-range, plus a rear 17cm paper cone, with all crossover components from Mundorf, SCR and Dayton Audio — a combination which delivered an impressively rendered version of Patricia Barber's slightly strange recording *Constantinople*.

A larger scale sound was soon emerging from the second speaker demonstrated, the three-way, five-driver Tower 4 Signature, with an integrated active subwoofer combining back-to-back shallow bass drivers, a remarkable fit in such a slim cabinet, powered internally by 150W MosFet amplifiers designed by Holton Audio in Tasmania. Above these, a Mundorf air-motion-transformer tweeter sits between MTM 13cm midrange drivers, all delivering, as Liere himself noted, "more of everything". More Barber, this time *Light My Fire*, proved the point to be made.

DAN A DIGITAL

From New South Wales' DanA Electro Acoustics, the URS (Ultimate Reference Sound) 108 model playing uses a triode valve amp in its top section for the main driver, and solid-state amps for the other drivers. Prominent between the two towers was a large F12 AC line filter, capable of providing 12 standard capacity power filtered sockets (2400W max) or six high capacity (4800W); I also spotted a six-socket DanA F-line filter operating with Masimo's Marantz/Bowers & Wilkins system in another room.

HEYNOW HI-FI

St Kilda hi-fi store owner Geoff Haynes had lost his voice by the time I sat in on the Sunday for a listen to his system. His goal for the show was to let people know about his Melbourne store, he whispered, and the different approach of HeyNow Hi-Fi, whose premises are purpose-designed as a contemporary apartment so that its media room and home theatre enable realistic demonstrations, as if in the comfort of your own home.

Uncharacteristically quiet as Haynes was, his system did plenty of talking, with Fischer & Fischer 470M SN loudspeakers flanking a stylish AG Lifter rack laden with such delights as Dohmann's Helix Two MK3 turntable playing through a Sutherland phono preamp, an EMM Labs/Meitner MA3 DAC/streamer and the Air Tight ATM-1E EL34 power amplifier.

SECRET CHORD ANALOGUE

Secret Chord Analogue switched things up this year, adding a demonstration room with its baffleless speakers and valve amplifiers to the space in which it could show its Record Restore system in operation. The Record Restore cleaning fluid claims not only to bind contaminants into an emulsion which can then be peeled away after drying but also remove static charging in the process. Founder Stephen Price had an excellent demo of its effects running courtesy of a Bud Powell LP where alternate tracks had been cleaned or left dirty, playing through the company's Confluence open baffle speakers under the power of an Elekit single-ended triad power amp kit.

The company's valve amps can be purchased either as a kit or fully built — or can be built under tutelage at regular 'Amp Camps' in Sydney's Blue Mountains.

audio research
Sonus faber
REL
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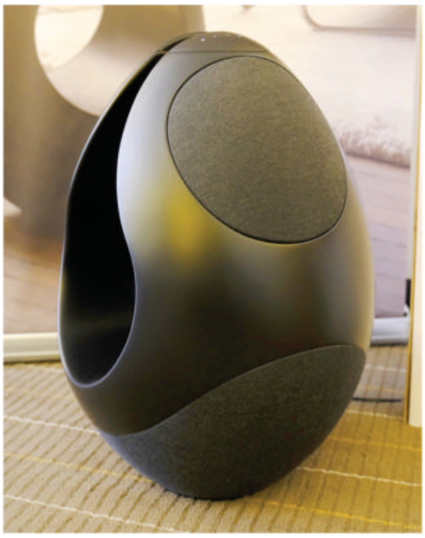
SYNERGY AUDIO VISUAL

Synergy was celebrating its 30th anniversary — our congratulations, especially as the Melbourne distributor issued a commemorative booklet for the showroom which greatly reduced the necessary note-taking required for us to list its extensive main system!

This included Rega's reference Naia turntable and Aura phono preamp, an Aurender N30SA network transport with Audio Research's DAC 9, REF 6 SE preamplifier and REF 330 M power amps, and not only Sonus faber's IL Cremonese Ext3me floorstanders ($105k) but six REL Carbon Speaker subwoofers stacked in sets of threes behind them! I make that something over $471k of kit, without cables. After some Boz Scaggs and London Grammar, the company's Jack Sarkissian demonstrated the difference made by removing the REL subwoofers from the system, even just by removing two of the six when listening to what he correctly identified as an unpleasant pop diva recording.

A second reference system in the room offered the joys of McIntosh, including the newly awarded C2800 preamp, the MC462 power amp and MT2 turntable, again with Sonus faber speakers, this time the Olympica Nova V floorstanders.

Outside the room was a bonus Ruark system, the neat little R610 streaming amplifier, just $2,299 alone or $3,600 with Ruark speakers.



PANTHEONE AUDIO

It was a very different delivery from Pantheone Audio, who demonstrated the Sydney company's uniquely crafted high-end wireless speakers — 'part sculpture, all sound!', as the company says. Pantheone's two models were both on audition.

Two larger egg-like Pantheone I active streaming speakers sat apart on the floor, not playing as a left/right pair but rather both delivering their individual room-filling 360-degree experience, which comes from a set of four silk-dome tweeters in each unit, with twin 4-inch midrangers and two 6.5-inch high-excursion bass drivers, and 400 watts of Class D power. The smaller active speaker is the Obsidian, its sculptural form inspired by volcanic stone, also streaming via wi-fi or Bluetooth and further able to operate on battery power (a 1-hour life is quoted). These were playing as a stereo pair.

These very different speakers were generating great word of mouth at the show for their very different approach to wireless audio, their philosophy of 'ART + FORM + SOUND', and being proudly Australian to boot.

YAMAHA MUSIC AUSTRALIA

With a self-playing Clavinova baby grand piano tinkling away in the lobby area, and a selection of brass and guitars in the room available for audition (though with a Wayne's World 'No Stairway To Heaven' sign), Yamaha was emphasising its musical credentials as the basis of its hi-fi prowess in the large ground floor room, where Wollongong's Sturmans Audiovisual team joined Yamaha staff in presenting a clean and convincing demonstration from the NS-2000A and NS-800A speakers, in piano black naturally, driven by the matching R-N2000A streaming amp.

Tight, solid and high-value sound emerged, whether during Fink's ethereal *So We Find Ourselves* or JJ Grey & Mofro's far funkier *Rooster*, while Les Davis & Son were also on hand to proffer their latest anti-vibrational wonders, now including a 'Field Marshall' to target electromagnetic noise around IEC plugs.

A major global first from Yamaha was up in a bonus headphone room on the ninth floor, where listeners could book a demo of the YH-4000 open-backs, one of two new high-end headphones from the Japanese company. The YH-4000 retain the 50mm orthodynamic (planar magnetic) drivers of the award-winning YH-5000SE, but use a few lesser materials and components to come in at a lower price, while aiming to deliver parallel transparency and openness.

Perhaps the most exciting arrival is the YH-C3000 ('C' for 'closed-back') 'armodynamic' headphones with 'orb-like' glossy black headshells of German beech wood and a more traditional 50mm dynamic driver, though one which uses the same Zylon for the 'armodynamic' diaphragms as is used in the drivers of the company's 5000 Series loudspeakers. They brought a slightly more closed-in soundstage, but a punchier and more solid delivery. Prices are yet to be announced, but the nod is on for the YH-3000 coming into Australia around $3,000.

SERHAN SWIFT

Brad Serhan and Morris Swift were coy about upcoming new developments waiting in the wings, but showgoers were treated to beautiful sounds from the slim, floorstanding mμ3F launched at last year's show, here supported ably by Boulder's 200W 866 integrated amplifier.

Impressive delivery also from a smaller desktop system using the Serhan Swift mμ2 standmounts just sitting on a table (on towels), showing how simple a truly great-sounding system can be. Highlights included a wide-open and dynamic acoustic version of *Walking on The Moon* by the Yuri Honing Trio through the standmounts, and thrillingly portrayed acoustic bass and cymbal work from Patricia Barber's sultry *Regular Pleasures* through the floorstanders.

BEYERDYNAMIC

Synchronised Technology lined up a tempting array of its Beyerdynamic headphones of various ilks. Key news includes a new generation of premium studio headphones in the closed-back DT 1770 Pro MkII and open-backed DT 1990 Pro MKII, bringing the newly developed TESLA.45 driver to these highly regarded studio staples, both priced at $949.

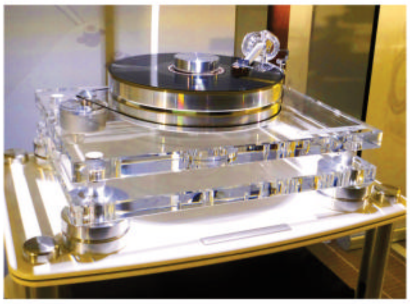
I was especially intrigued, however, by a new group of DT IE in-ear monitors which feature application-optimised sound signatures, as well as very high passive sound insulation of -39dB, making them a standout cabled IEM solution. The four models share dynamic TESLA.11 driver systems with extremely low distortion and high maximum sound pressure levels up to 137dB, but they differ according to the proposed use. The DT 70 IE is designed for mixing and critical listening, with a normal reference balance, but then the DT 71 IE has a deliberately powerful bass foundation, recessed mids, and strong treble profile, deemed ideal for drummers and bass players. Meanwhile, the DT 72 IE is for guitarists and vocalists, and the DT 73 IE for pianists, keyboardists and orchestral musicians — "a subtle boost in the treble range above 5kHz ensures precise overtones". Intriguing! All versions retail at $849.

SECOND PLACE
BEST SOUND

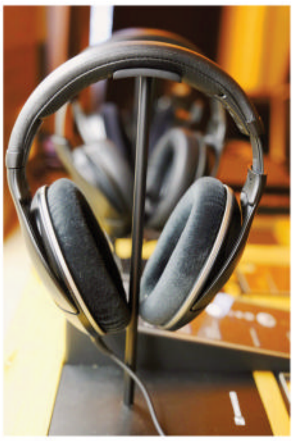
AUDIO MARKETING

A week after the show, our ears were still feeling the effects of the demonstration in Audio Marketing's room, perhaps a few dB higher for me than for most visitors, showing the ability of Triangle's active Capella standmounts to deliver astonishing dynamics and volume levels when playing Ghost Rider's *Make Us Stronger*. The Capellas can be a system in themselves, streaming from AirPlay 2, Chromecast, Bluetooth or Roon, though their included 'hub' also adds USB-B, optical, coaxial, HDMI and analogue inputs.

Also in the room was Musical Fidelity's acrylically clear M8xTT turntable and its new M8x Vinyl phono stage (as reviewed earlier in this very issue), but the acoustic shock from the Capellas had us withdrawing politely before these could be added to the chain. Full marks for performance, power and impressing the visitors here!



SENNHEISER



Here we had an extensive range of headsets and earbuds, from the HD 820 S and HD 800 through the 600 Series and the brand-new open-backed HD 550, described as "an open invitation to unpack the lush layers of today's music and games for hours on end"; I find them neutral and analytical.

Those in search of new earbuds could try the IE 300, 600 and 900 models. The flagship $2400 IE 900 sport a precision-manufactured aluminium housing containing a single premium dynamic driver backed by Sennheiser's innovative X3R technology triple–resonator chamber technology. Along with the latest Momentum wireless over-ears, Sennheiser brought the lot for those wanting to find the personal sound best for them.

AUDIO MAGIC / KRISPY AUDIO

It was another double rack of hi-fi joys from Audio Magic and Krispy, fronted by the Kudos Titan 808 speakers with their distinctive split-cabinet design isolating low-bass resonances from the bass-mid enclosures, perhaps the secret of the flawlessly clear sonic delivery coming from the connected system.

Listeners were treated to playback from the vast Esoteric Grandioso K1X SACD player (with the highest rigidity and heaviest construction in the 30+ year history of the brand's Vibration-Free Rigid Disc-Clamping System!), while analogue fans could enjoy the Bergmann Modi airbearing turntable with its side pump keeping the platter floating, with an Ayre phono stage, and the Copland CTA407 valve integrated amp showing its quartet of 6550 output valves. Another stunning performance from this partnership and room.

THIRD PLACE
BEST SOUND

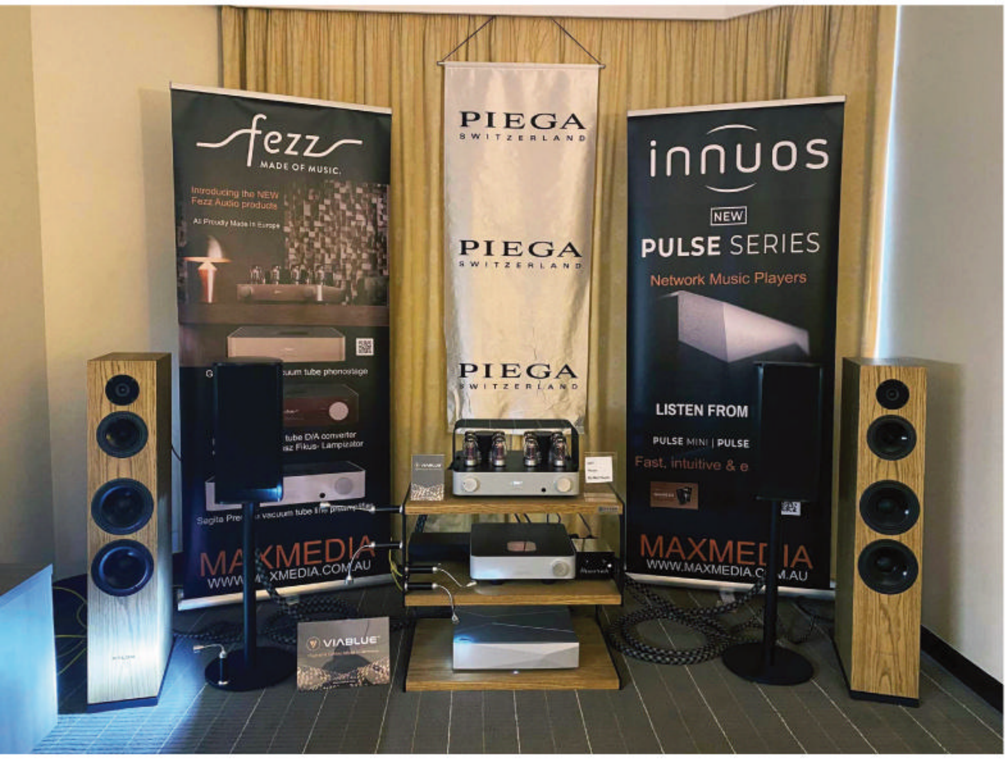
Bad Room?
Great Sound.

MAGENTA AUDIO

When you've got a speaker that does everything, there's not much to show in your demonstration room! In Magenta's there was no stack of sources and amplifiers because the pair of award-winning Dutch & Dutch 8c speakers here have their own internal power, streaming and plenty of other hidden wonders.

While they present as an apparent two-way, with a magnesium-alloy dome tweeter and eight-inch midrange, there are two more 8-inch high-excursion bass drivers to the rear, while the 49cm-high oak cabinets contain three amplifiers providing 1000 watts of power.

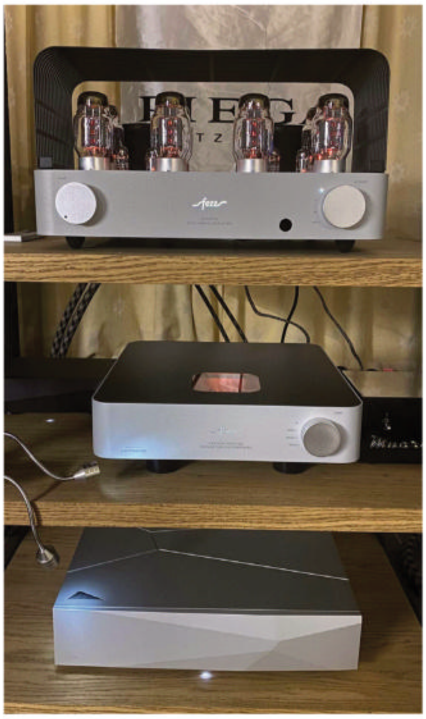
The result is a claimed utterly flat response from 20Hz to 20kHz, along with customisable onboard DSP to integrate the 8c speakers into a room — "Bad Room? Great Sound" promised Magenta's pull-up sign. They certainly did the job with Doug MacLeod's *Ain't It Rough* on Reference Recordings, its extended chat intro with fully realistic drum punctuations before his storytelling blues kicked in. Magenta certainly proved the point and pulled the praise from the punters, scoring third spot in the public poll for 'Best Sound of the Show'.



MAXMEDIA

The Maxmedia team invited attendees to "rethink, overcome and discover the best in high-end audio", and their room saw Cameron Keating and his team offering just that opportunity. Innuos's ZEN Next Gen server was in charge of the tunes, the French company's first ZEN server to get the NG treatment. Its digital signal fed the Fezz Equinox Prestige DAC, while topping the Polish Pylon Obsidian rack was the Fezz Olympia dual mono power amp, based on eight KT88 valves and delivering 100 watts of power.

Two pairs of speakers were in residence, with Keating switching between them: the black aluminium cabinets of Piega's COAX 411 standmount speakers with coaxial ribbon tweeter and SEAS graphene 160mm UHQD woofer, or the notably leaning floorstanders, also from Poland's Pylon, the three-way Diamond 30 Mk2.



WAVETRAIN CINEMAS

I admit to putting my fingers in my ears to protect them during the more extreme moments of David Moseley's high-end home cinema demonstration, which brought a Christie K 4K-15 RGB pure laser projector to deliver full Rec.2020 colour and a blistering lumen count for the film clips, while a Storm processor with Dirac Live ART active room treatment fed Elementi's digital active Fire speakers in a seven-channel system, backed by no fewer than four subwoofers — two of them mere Elementi Onyx with 15-inch neodymium-magneted ultra-low distortion drivers, but two being the simply vast Elementi Kola subwoofers (named after the Kola Deep, deepest hole ever dug into the Earth's crust).

The Kolas have 24-inch drivers and are recommended to sit between eight and 18 metres from the seats. Here they were rather closer, which may have explained the need for protective fingers during the fist-slamming clip from *John Wick 4*. Impressive, if also oppressive.

LEICA CAMERA AUSTRALIA

Bright, colourful and comfortable are words that could aptly describe both Leica's lounge suite on the hotel's basement floor and the images from its pair of projectors, which easily demonstrated the great advantage of high-quality glass lenses, the secret weapons that make Leica's projectors so successful. Brighter, sharper and less aberrated than rival lenses, Leica's glass leads a series of design upgrades that have pushed the brand into the high-end of home projection over the last three years, first with the ultra-short-throw Cine 1 'Cinema TV' and then the more recent and smaller semi-portable Cine Play 1.

The latter was set up deliberately off-axis to show how it can nevertheless employ its built-in smarts to deliver a bright, colourful and suitably rectangular large-screen image. A delightful sanctuary, with excellent information as well as performance.

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SOUND+IMAGE
MEET THE YEAR'S BEST HI-FI & HOME CINEMA

RICHTER

The big news from Sydney's Richter loomed large on the outside of the array of satin black speakers facing listeners in Richter's room up in the Corridor of Sound: new Richter Dragons, which will debut as the first of a Series 7SE, slotting into the company's range between the 110cm Excalibur and 97cm Wizards. It's like no Dragon before it, says Richter.

A new curved cabinet is finished in a room-friendly natural walnut veneer with front baffles in 'anthracite grey', while the top section adopts an MTM arrangement of midranges, doubling up on the Wizard's 6.5-inch composite paper cone. The dedicated bass driver, meanwhile, gains from the Bass Shelf Extension system developed by designer Dr. Martin Gosnell for the larger Excalibur speaker, so employing two quite differently-tuned bass systems — one for low-frequency depth, the other for clean transient performance at all volume levels.

The result, says Richter's Brian Rodgers, is a speaker that can be used at a dinner party but is ready for a dance party. Estimated pricing is $6500 a pair. The Wizards and recently award-winning Merlin S6plus were also ready to play, with tunes from a Bluesound Icon streamer through a Musical Fidelity M6 amplifier. Notable tune from the demo: YOOKiE's *Sunshine of Your Wub*: fun!

FOURTH PLACE
BEST SOUND

MASIMO CONSUMER

Three rooms formed an exclusive corner of the show for the best of Masimo's many brands, including an excellent Denon/Polk system, with the Denon DNP-2000NE streamer pulling tunes from Tidal for the recently award-winning Denon PMA-3000NE amplifier to drive Polk's Reserve R700 floorstanding speakers. The performance, when applied to Smilk's *Last Rainforest*, was simply exceptional at the price (around $11k): perhaps the best-value performance of the show. Yet also in the room was a suggested system of simply a Denon Home compact streaming amp (with HEOS streaming and HDMI eARC, $1,199) connected to the little Polk Reserve R100 ($1,099) — another bargain little system with significant abilities.

Next door the lusciously finished Bowers & Wilkins 805 D4 Signature loudspeakers, at $21,900 the pair, were supported by twin DB3D subwoofers ($4,399 each) and a stack of Marantz 10 Series electronics, with the Link 10N network audio player, SACD 10 reference CD player and 2 x 250W of Purifi amplification within the Model 10 integrated amplifier. The stack was topped by Denon's flagship DP-3000 direct-drive turntable with a DL 103R cartridge. Yet all this desirable kit melted away as the tunes played, a Ronnie Earl track with awesome piano tone and such toe-tappingly fine rhythms that I felt like applauding at the end. No wonder this room stacked up the public votes in our competition.

Masimo's third room focused on the Marantz Horizon and Grand Horizon wireless speakers (the latter reviewed in this issue), offering design-conscious consumers a chance to get touchy with the 'AuraControl' of these luxurious all-in-one solutions.

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FUTURE

Engineers discuss how there's more to music streamers than their chipsets

Streaming
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01:26
04:30
-30dB
SELECT
VOL
audiolab

There's a common misconception that music streamers are simply about the qualities of their digital chipsets alone. That is, the computer-like streaming module that pulls digital music data from the cloud (from Tidal's server, say) and packages it into a smooth constant data stream, and the digital-to-analogue converter (DAC) that then turns that data stream into an analogue waveform the rest of your hi-fi system can understand.

It somewhat stems from the broader fallacy that digital audio's inherent 'ones and zeros' makeup means that there can be limited differentiation in their delivery. But as eloquently illustrated by Cambridge Audio's engineering team, such chips are comparable to how an orchestra performs: "If the conductor isn't very good, the orchestra won't perform as well as they can. However, if the conductor is surrounded by poor musicians or the wrong instruments, again the performance won't be as good as it could be."

Indeed, while chipsets do matter, and it is true that all streamers perform one stage of the process with parity (which I'll get to), their audio performance is predominantly down to how the chips are implemented. As Paul Neville from Harman International told me, "engineering a high-quality music streamer requires a holistic approach to the signal path, from the network input to the final analogue output."

So what exactly matters in music streamer design? Here's what experts over at Audiolab, Cambridge Audio, Chord Electronics, Cyrus, dCS, Fell Audio, WiiM, Lenbrook (NAD, Bluesound) and Harman International (Arcam, Mark Levinson) had to say about what makes music streamers truly sing...

CHIPS DO MATTER

The streaming module is a crucial music streamer component. It communicates with the source to get your music before packaging it up in a digital language the DAC chip can understand. Up until this point, the digital audio data is more or less handled as it would be had it come from a CD transport.

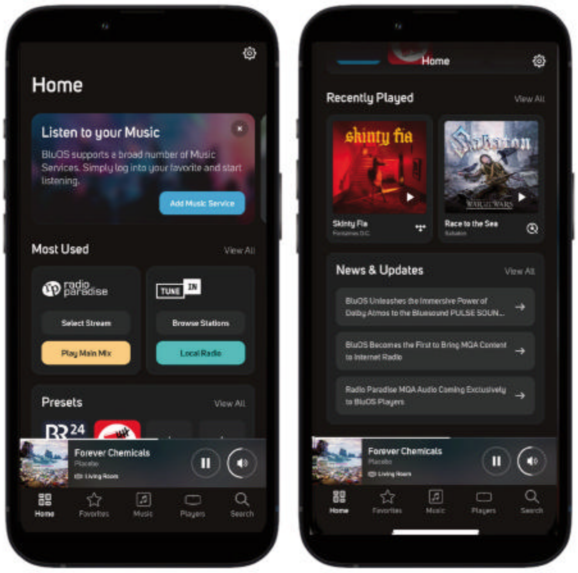
As dCS's James Cook says, this first process performed by the streaming module guarantees bit-perfect data from a lossless source. "This means two comparable streamers that support the same version of a streaming service will output an identical data stream," he says. "This holds true largely regardless of network conditions, the equipment upstream of the network streamer, and to a degree the streamer itself." That's the parity — and to some extent why some people believe that music streamers (those that are DAC-less, anyway) should all sound the same.

What about your home network conditions; does that affect the obtaining of networked music? "While network stability is important, the reality is that most modern connections, whether wi-fi or wired, offer ample bandwidth for even the highest-resolution audio," says Cambridge Audio's engineering team. "Streaming 4K video with multi-channel audio is a far greater data demand than high-resolution audio. If your network can handle that, it can almost certainly handle your music."

How the data stream is rendered before the digital-to-analogue conversion stage, however, does make a difference. "The way a streamer unpacks and processes a digital file has already shaped the final sound," says Fell Audio's Luke Tyson. "Its handling and transmission of ones and zeroes within the [circuit] board affect timing, accuracy and ultimately musicality; garbage in, garbage out!"

Tyson says that in this world of increasingly affordable music streamers, "it's easy to assume that a great music streamer is simply defined by the DAC chipset or streaming module it uses". Now, the quality of the streaming and DAC chips themselves *does* matter — specifically in the case of the latter. "The first step is selecting the right chip," says Harman International's Neville, while Cambridge and Audiolab also stress the importance of using a good-quality DAC chip.

But achieving good performance goes far beyond picking expensive chipsets. "Often you see 'insert latest DAC name



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BluOS Unleashes the Immersive Power of Dolby Atmos to the Bluesound PULSE SOUN...

BluOS Becomes the First to Bring MQA Content to Internet Radio

Radio Paradise MQA Audio Coming Exclusively to BluOS Players

here' as a marketing bullet point as if just having it in that product guarantees a good sound," says Cyrus's Nick Clarke.

As Audiolab and Cambridge Audio reiterate, what is just as crucial to performance is how it is implemented within, and complemented by, the surrounding components and circuitry. And often, Clarke continues, "as the performance and functionality of these devices [chips] increase, the scope for not handling them correctly also increases."

NEGATING THE NOISE

Several design factors need careful consideration in order to prevent a plague affecting all hi-fi: noise. "Even the best DACs and processors won't perform optimally if the power supply is noisy or the circuit design introduces unwanted electrical interference," says WiiM's Dr. Lifeng Zhao.

Let's take the power supply. Ideally you want separate supplies feeding the digital (DAC) and analogue (post-DAC) stages with, as Audiolab's Jan Ertner describes, "clean, consistent power".

Ertner says that the DAC's supply in Audiolab's flagship 9000N having multiple discrete ultra-low-noise regulators providing power separately to the left and right channels for each conversion stage is a "vital contributor" to the machine's performance.

As an aside, Neville at Harman believes that linear power supplies are preferable to the smaller and arguably more efficient switch-mode supplies here, as they produce less noise and provide "cleaner and more stable power for optimal sound quality". As he rightly points out, you need these separate analogue and digital supplies to be isolated from one another, too. And 'away' from sensitive circuitry, full stop.

You can go one better than that, too. Chord Electronics' Matt Bartlett says that using a streamer with an *external* DAC is "one of the best ways to isolate the audio signals, as this allows you to keep all the analogue audio signals you actually listen to, away from any of the noisier streaming functions".

As I mentioned earlier, the majority of music streamers do, however, have DACs built-in. Those without one do the pre-DAC music pulling and processing only, are often aspirational designs and typically referred to as 'network transports' or 'network bridges'; the Lumin U2 Mini is an example of such. You then have noise creeping into the audio path or supply from the streamer processing or conversion. Bartlett likens streamers to computers (they are "computers optimised to run dedicated audio/streaming software"), which are inherently noisy. "They have a lot of clocks and signals that, if not handled correctly, can induce noise," he says. "This is exacerbated by the need to make the software run as fast as possible to give a positive user experience; users will not appreciate lags and delays in playback if the software cannot keep up. To do this effectively, larger processing and memory is required which, more often than not, also requires faster clocks and more demand on the power supply, and so more noise."

Cyrus's Clarke explains that the way streamers receive and decode data — by receiving it in blocks (sometimes referred to as 'packets') and placing it in a buffer for decoding in blocks — can also produce noise. "Specifically when dealing with compressed audio, a poor [decoding] implementation will have measurable artefacts at the block-processing frequency," he says. In summary, "a low-noise environment is crucial to unlocking the full potential of high-resolution audio," says Cambridge Audio.

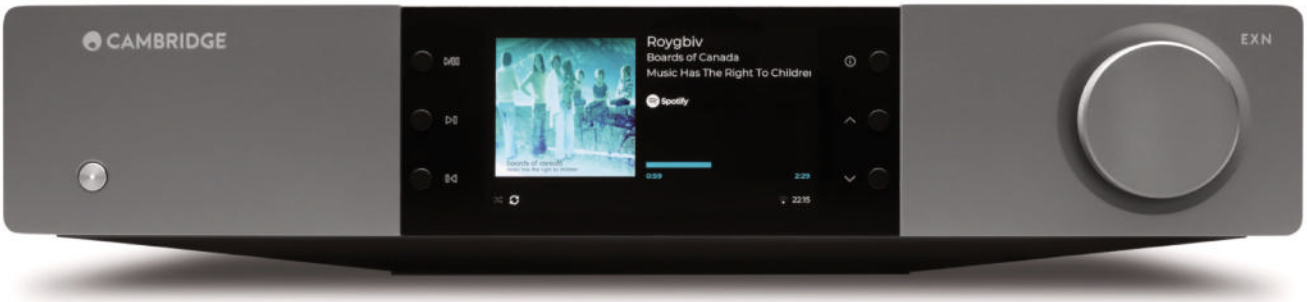
A QUESTION OF TIMING, AND OTHER THINGS

One of the most important aspects of digital audio delivery is trying to prevent (or minimise) 'jitter'. In the case of music streamers, this is the distortion artefact that occurs from slight timing deviations in the clocking signal during the digital-to-analogue conversion stage. These small errors mean the reproduced analogue waveform isn't exactly the same as the original. Unsurprisingly then, every manufacturer I spoke to mentioned the importance of clock design in streamers.

The most important one is the 'master' that regulates the conversion stage; however Cyrus's Clarke also explains that there is scope for large amounts of jitter in the sending of data to the DAC (as there is with any digital source pre-DAC). He says that while modern DACs are then "very good at handling this 'automatically', it would be much better if the data was correctly timed in the first place".

This somewhat goes back to Clarke's earlier comments that what happens before the DAC stage has an impact, as well

With its EXN100, Cambridge Audio claims its engineers have managed to eke out even greater performance from its 32-bit ESS ES9028Q2M Reference DAC chip than ever before.



as Tyson's claim that "the way the renderer buffers and reconstructs the digital audio signal before passing it to the DAC can make or break the overall performance".

For this reason, dCS's Cook says that for high-performance streamers it is vital that the streaming solution can accept an external clock signal as this helps to ensure that the DAC-bound audio signal leaving the streamer has a low level of jitter. "A key feature of this is having high-quality clock circuitry inside the product running at integer multiples of the two base audio sample rates (44.1kHz and 48kHz) which can be fed into the streamer," he says.

Clocks and timing aside, Greg Stidsen of Lenbrook notes that the circuit board layout is important too: "How the traces are laid, where the components are placed — all of this affects the sounds to varying degrees." Stidsen keenly reminds me that these kind of changes almost exclusively evolved the Bluesound Node 2 (2015) to the Node 2i (2018) on the engineering side of things, and that, as stated in the review myself and my team wrote, just how much the performance had improved in the newer model as a result.

Harman International's Neville agrees that "adherence to high-speed circuit board design principles" is crucial for signal integrity. Neville and Clarke (Cyrus) discuss how, in such hybrid digital and analogue products, careful management of signal grounding (the reference point at which voltages are measured) is also important, with particular focus on where the analogue and digital ground domains intersect to minimise noise and interference. Of course, Neville adds, on the whole, carefully tuned analogue stages are essential too!

The Cyrus 40 ST's DAC chip supports 32-bit/768kHz, but its Bluesound streaming module is 'limited' to 24-bit/192kHz.

SOFTWARE AND SOUND

Where digital is the topic of conversation, software isn't far behind. When you think of music streamer software, you probably think of the app — the thing that can turn your phone or tablet into a practical and intuitive remote control for the platform your streamer runs. It's that operation, alongside the behind-the-scenes design, that impacts not only a product's user experience but also its audio performance.

Stidsen of Lenbrook, who knows a thing or two about developing streaming systems, with the company's Bluesound brand having developed its own system (BluOS) based on a Linux kernel, goes as far as saying that "audio quality is defined just as much by software as it is by hardware in a streamer".

"A well-designed streaming app directly impacts how music sounds, from how the signal is routed to how it interacts with the hardware," says Audiolab's Jamie O'Callaghan, tying in with an earlier point that the way in which a streaming platform processes digital data is primarily down to software.

"The various codec implementations and audio chain are all areas where the sound quality can be greatly diminished if the software engineer does not have audio expertise," adds Stidsen.

WiiM's Dr. Lifeng Zhao also shares the opinion that hardware alone doesn't guarantee a great streamer, and it is unfortunate but true that I've come across great-sounding streamers that I haven't been able to wholly recommend due to their sub-par user experience. Indeed, nothing is worse than buggy app control prone to drop-outs or lag.

Actually, there is one thing: music playback glitches. "A platform must have a proven track record of stability, ongoing updates and innovations," says O'Callaghan (Audiolab), while his colleague (and others) stress the importance of platform relevance and longevity, considering the never-ending road of streaming service updates and protocols that lay ahead of music streamer development.

THE BIG PICTURE

And we now get back to my opening point. Despite those who, from the dawn of digital audio, have insisted that all digital audio kit must sound the same, Audiolab's Ertner says that "this is demonstrably not the case, and that includes music streamers — even those that use the same streaming platform or chips".

As several streamer manufacturers have examined here, everything from power supply and analogue stage design to software processing and platform handling impacts streamer sound performance — not just chipset selection.

To that end, Fell Audio's Tyson proffers a fitting denouement: "A more entry-level ESS Sabre DAC chip, when given a carefully considered discrete power supply feed, better component layout, and efforts to keep signal integrity, can yield superior results and will most likely provide a more complete musical performance than simply opting for the more expensive DAC model."

So the next time you're shopping for and comparing music streamer specifications, it would be wise to remember the bigger picture. ***Becky Roberts***

Eclipsa Audio

Eclipsa Audio: the ins and outs of Samsung and Google's new Dolby Atmos rival

"Oh, great, another format war! That's just what we want!" said no AV fan ever. Yet, on the surface at least, that's precisely what it looks like we are about to get following the unveiling at the Consumer Electronics Show in January of Eclipsa Audio: a new surround sound format that is apparently designed to take on the audio dominance of Dolby and DTS.

Eclipsa Audio is a new '3D audio technology' capable of delivering up to 28 individual input channels in a single bitstream. Each of these channels can be rendered out to speakers or headphones and set to either be fixed in nature (like a mic in a recording studio) or dynamic (to track moving objects such as a speeding vehicle in a movie car chase).

Creators can adjust the locations and intensity of sounds within the audio space Eclipsa Audio can create, as with Dolby Atmos and DTS:X, and there's also support for the binaural rendering that mobile applications need to deliver more immersive sound experiences to headphones. It also allows listeners to adjust aspects of its sound for a more personal, customised experience.

Eclipsa Audio is the result of two years of collaboration between Samsung and Google. The two brands announced back in 2023 that they had started working together on a new 3D audio platform under the working title of Immersive Audio Model and Formats (IAMF), and Eclipsa Audio is the final name given to the results of these combined efforts.

HOW IS IT DIFFERENT TO OTHER 3D SOUND FORMATS?

The main difference between Eclipsa Audio — and indeed the main reason Samsung and Google decided to pursue its creation — is that it's open source. In other words, while soundtrack creators and playback device manufacturers wanting to use Dolby Atmos or DTS:X must pay a licence fee for the privilege, Eclipsa Audio is free for anyone to use.

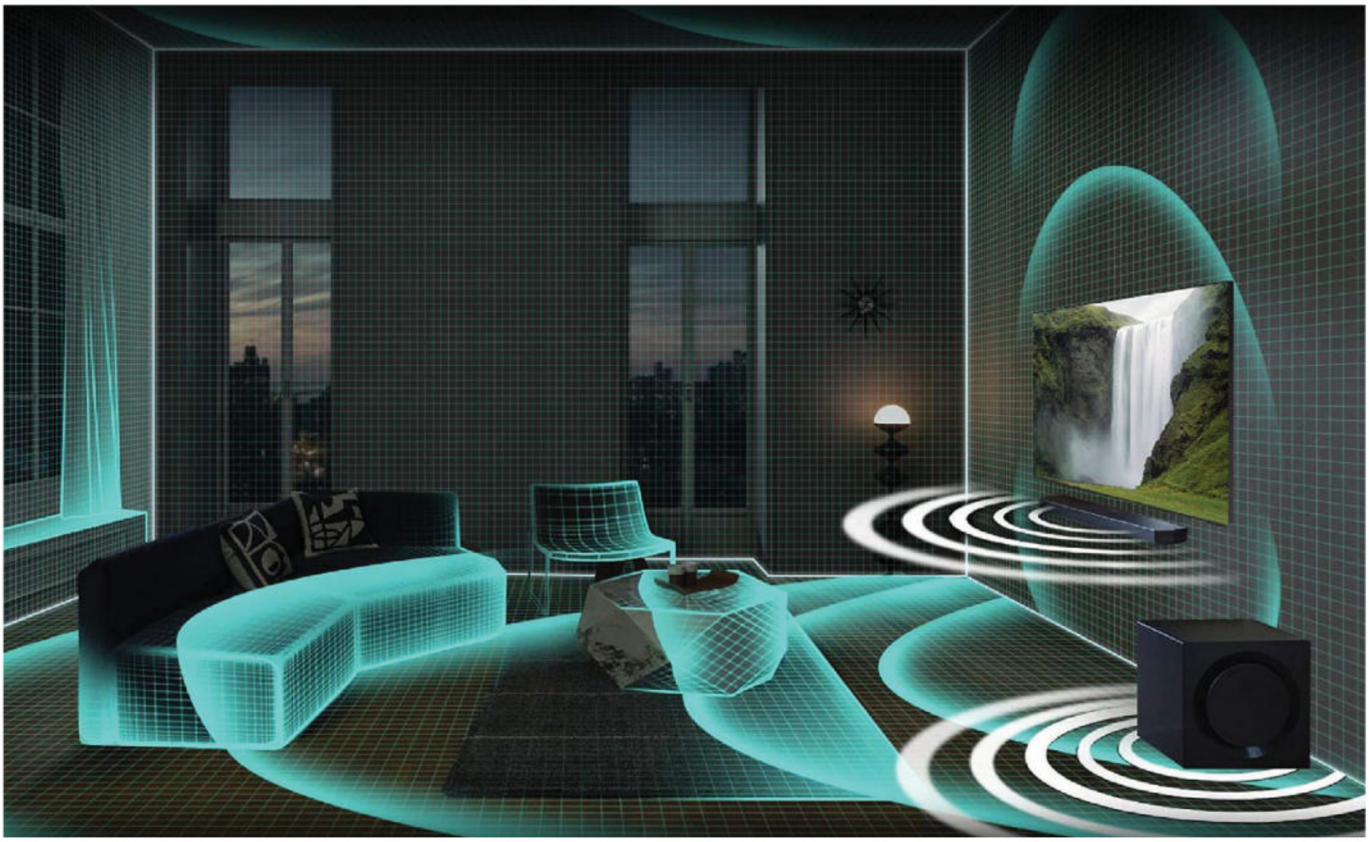
It's easy to understand why Samsung and Google would have been keen on coming up with an open-source 3D sound format. It gives Samsung a 3D sound system for its TVs, projectors, soundbars and so on that it doesn't have to pay a third party. And for Google, it allows amateur content creators to elevate their productions on sites such as Google's YouTube with 3D audio without needing to go down the costly Dolby or DTS routes.

In fact, in theory at least, Eclipsa Audio could enable these content creators to deliver the sort of immersive sound experiences currently only associated with expensive Hollywood movies.

"Previous open-source audio codecs only supported horizontal sound expression," says WooHyun Nam from the Visual Technology Team at Samsung Research. "With IAMF technology, audio can now be expressed vertically so that sound is increasingly multi-directional."

"IAMF makes sound more realistic, by allowing listeners to hear audio in front, behind or to either side and also above or below them," he says. "As such, when IAMF technology is applied to home TV speakers and sound bars, it allows listeners to hear sounds such as birds flying over their head on their TVs at home."

> Manufacturers wanting to use Dolby Atmos or DTS:X must pay a license fee... Eclipsa Audio is free for anyone



Eclipsa Audio will work in similar fashion to the market-dominating Dolby Atmos format, delivering immersive living room sound.

Nam also explains how IAMF uses AI and deep-learning technology to analyse specific scenes and adjust the delivery accordingly. "In TV and film, there are certain scenes where the soundtrack or background music is the main focus," he says. "IAMF will balance the sound in these instances. Similarly, the technology will fine-tune audio when there is character dialogue to allow the listener to focus on the conversation."

HOW CAN YOU EXPERIENCE IT?

Eclipsa Audio is an end-to-end audio system. So you need to have the right software to create Eclipsa Audio soundtracks and the right playback hardware able to decode Eclipsa Audio soundtrack files. Samsung is the only brand so far to announce that it is building Eclipsa Audio support into its 2025 products.

In fact, it will appear in pretty much all of Samsung's new TVs, all the way from its affordable Crystal UHD models up to its premium 4K Quantum Dot OLED and Neo QLED 8K LCD models. It will also include Eclipsa Audio in its soundbar range, although it hasn't confirmed exactly which models this will apply to, apart from the flagship HW-Q990F package.

The requirements for creating Eclipsa Audio mixes are less clear at this stage, despite the system potentially living or dying on how straightforward it is to use. Google has stressed, though, that content creation will be possible across true consumer devices, while its open-source nature means that Eclipsa Audio supports several popular existing codecs, including LPCM, AAC, FLAC and Opus.

In fact, multiple workflows are already available for creating the IAMF Eclipsa files. For instance, two different encoders are available that can encode WAV files to Eclipsa Audio, and it's also possible already to merge IAMF files and video into an MP4 file. Technical details on what can be done can be found in a recent blog in the opensource section of googleblog (https://opensource.googleblog.com/2025/01/introducing-eclipsa-audio-immersive-audio-for-everyone.html), and there's a link from that to a set of IAMF-related tools on github. Google has finally stated, too, that it expects to be able to support Eclipsa Audio uploads and playback on YouTube at some point this year.

HOW GOOD WILL IT SOUND?

In principle, there's no obvious technical reason why Eclipsa Audio tracks couldn't sound similar to Dolby Atmos and DTS:X mixes. Certainly, Samsung and Google talk enthusiastically about Eclipsa allowing anyone to give their soundscapes a 'Hollywood feel'.

That said, issues such as the likely relative lack of professional support compared with the Dolby and DTS licensed sound systems, the relative inexperience of the sort of creators Eclipsa Audio is initially aiming at, and the relatively 'first draft' state

Samsung has confirmed that its range-topping HW-Q990F soundbar package for 2025 will support Eclipsa Audio.

of the Eclipsa Audio toolset versus the well-established Dolby and DTS systems will all likely have a part to play in these early Eclipsa days.

Samsung and Google have revealed, however, that they are already working with the Telecommunications Technology Association (TTA) on developing a certification program for Eclipsa Audio devices, in a bid to achieve some level of performance consistency/quality control from the get-go.

SO IS IT GAME OVER FOR DOLBY AND DTS?

It's not impossible that the arrival of Eclipsa Audio marks the beginning of yet another of the dreaded format wars that litter the history of home entertainment technology. You could certainly question, in particular, Samsung's motives for putting so much effort into developing Eclipsa Audio given that it famously chooses not to support Dolby Vision HDR on its TVs because it doesn't want (or, as the company prefers to claim, doesn't feel the technical need) to pay the licence fee.

So maybe Samsung's long-term hope really might be that Eclipsa Audio will ultimately conquer all and become the de facto sound format across Hollywood and beyond, consigning cash-hungry Dolby and DTS to the history books.

It's hard, though, to believe that Samsung really thinks this could happen. Dolby Atmos and DTS:X are so hugely entrenched in the movie and TV worlds now, and pretty much ubiquitous across home entertainment and commercial cinema hardware, that it's difficult to imagine them being jettisoned for a completely new audio 'upstart'.

Also, the Samsung Dolby Vision situation I mentioned a moment ago is actually quite different to the Eclipsa Audio one. While Samsung can argue (legitimately or otherwise) that what its TVs can do with the basic HDR10 format renders Dolby Vision unnecessary, if it ends up only supporting Eclipsa Audio on its TVs and soundbars then the Dolby and DTS soundtracks used on just about every film and TV show for years now simply won't work. Or they will default down to a more basic mix that no amount of 3D spatial audio 'virtualisation' will be able to satisfactorily fix.

Google expects to be able to support Eclipsa Audio uploads and playback on YouTube at some point this year

It's no surprise, in fact, that Eclipsa's main focus at this point is on an area where Dolby Atmos and DTS will likely never become a mainstream option: amateur content creation. There's no indication yet that Eclipsa is being pushed at the big movie and TV studios… yet.

This doesn't mean Eclipsa Audio might not become an important player in the audio space. If it really can democratise the 3D audio creative process to a level where almost anyone can potentially create Hollywood-standard sound mixes, it has every chance of finding its way onto any number of YouTube videos.

John Archer

BANG & OLUFSEN

Premium Sound — and looks

St Kilda's premium audio store has opened the first 'Focal Powered by Naim' showroom in Australia

Rob Bergervoet (right) and Jonathan Dugdale followed their passion for premium audio, taking over the St Kilda store in late 2020.

Premium Sound isn't your average hi-fi store. Walk through the glass doors of the striking corner presence on St Kilda Road, having hopped off the tram opposite or parked your car in the store's dedicated parking area outside, and you're greeted by a light, modern, high-ceiling and spacious open-plan showroom that any interior designer would approve of. In place of the oft-spied floor-to-ceiling piles of boxes, racks of hi-fi equipment and concomitant trailing cable hazards are cream couches and stools and some of the most aesthetically pleasing and design ambitious audio gear you can get your hands on.

You can probably paint a more vivid picture yourself if I tell you the brands Premium Sound stocks — Bang & Olufsen, Devialet, Naim, Focal, Sonos, Ruark and Marshall, among other lifestyle audio brands. This St Kilda staple is an attractive store selling attractive kit.

It's more or less been that way since the store was established in 1975, although then (and for 45 years of its life) it was called Denman Audio (known in its later years as 'the Bose store'), owned by the Herszberg family. Hi-fi enthusiast Rob Bergervoet and his business partner Jonathan Dugdale bought the St Kilda staple at the tail end of 2020, changing the name (albeit keeping one of the building's old 'Denman Audio' signs, only visible from

SONOS
PREMIUM SOUND
THE SOUND SPECIALISTS
B&O
70
BANG & OLUFSEN
ACTON III
BEOLAB 8
SONOS

Premium Sound has expanded past the store's heritage Bose focus to include the reputable likes of Bang & Olufsen, Focal, Naim and Sonos.

BANG & OLUFSEN BANG & OLUFSEN

the car park!), and expanding the focus from Bose to B&O and Sonos.

Bergervoet's background is in wholesale importing for building products, but he was ready for a change and, having always had a keen interest in hi-fi — especially B&O products; he loves his B&O Theatre soundbar at home — he and Dugdale sought to set up a store in Richmond's Swan Street opposite Ferrari… until the Herszbergs came knocking. "I've always liked audio, so when this St Kilda opportunity came along I jumped on it," Bergervoet tells me.

Fast forward four-and-a-half years, and Premium Sound is one of the biggest B&O stores in Australia and now stocks and specialises in around 15 brands. As of late last year, it is also the official Focal and Naim store in Melbourne, with the first 'Focal Powered by Naim' showroom in Oz. Taking centre stage inside it at the moment are Focal's Diva Utopia active streaming speakers, which a review published in *Australian Hi-Fi* issue #539 praised for their delivery of "proper high-end sound from a neat two-speaker form factor," and which went down a storm with Sydney audiences at last month's Australian Hi-Fi Show, with Premium Sound running the demo room. Indeed, that pumping room was one of the busiest over the long weekend and received the most public votes to win the 'Best Sound of Show' competition.

The desire for that dedicated showroom saw the Premium Sound team renovate the back of the store in order to provide optimal conditions for the Diva Utopia — and other Naim and Focal systems, of course — and do justice to their renowned talents.

The simplicity of the Diva Utopia — essentially a whole network streaming system in just two speaker cabinets, with no interconnecting cables or other accessories necessary — is a theme of the Premium Sound store experience. "Everything's plugged in here and pretty much all of it can be demoed as it is," said Bergervoet, who recognises the unwavering popularity of the portable and lifestyle audio market. "Focal headphones, Naim Mu-so systems, Marshall and Bang & Olufsen portable speakers do very well… it's all very popular."

While in-home demonstrations, installations and on-site visits for people building houses are part of the St Kilda store's package, it's clear — perhaps above all else — that Bergervoet values the brick-and-mortar experience. "It isn't often that

… the official Focal and Naim store in Melbourne, with the first 'Focal Powered by Naim' showroom in Oz

FOCAL
Powered by naim

a customer comes in and doesn't have a good time here," he says. And that isn't just down to the Ikarao karaoke machines in one corner of the store! ("We've sold bucketloads of those; people like to sing!")

"We believe in the products we sell and offer an experience to go with it," he says. "We like to go above and beyond for the customers. It's a relaxed environment, very laid back. We have a cafe with Barista-made coffee and cold drinks, easy parking and a no-pressure approach. We try to make it more of a friendship than a transaction, and a lot of our customers are so loyal to us."

> "It isn't often that a customer comes in and doesn't have a good time here... it's a relaxed environment"

Sure, you'll be hard-pressed to find a product on the Premium Sound showfloor that doesn't look attractive (except, I must say, for those karaoke machines!), but Bergervoet is just as confident that their sound quality will attract customers.

"Even the B&O Beosound A5 wireless speaker... at $2,500, it's a serious spend, but for what it is the sound it produces is out of this world," he says.

"A lot of people miss out on Sonos [soundbars] because if they go to a big-box store and buy an LG TV, the staff member will say 'buy this LG soundbar too', or the one from Samsung or Sony," he says. "But your TV experience can be so much better by buying a dedicated soundbar from a dedicated soundbar brand. The Sonos Arc Ultra is mind-blowing. It's just getting people to listen to it. Once they listen, they're blown away.

It's great to play with the best brands in the world and allow people to experience music as it should be experienced."

Premium Sound isn't about boutique, black-box hi-fi separates or mass-market JB Hi-Fi and Amazon fare, but it is one of the few stores bridging that divide with a keen focus on the increasingly desirable market for uncomplicated, luxury, lifestyle-orientated audio, whether we're talking the Focal Diva Utopia ($60,000), the Naim Uniti Atom streaming amplifier ($5,750) paired with Focal Vestia floorstanders (from $4,400), or simply the Ruark R2 MK4 tabletop system ($949) — and it knows its street corner well.

"The audiovisual experience should be an enjoyable thing," he said. "Why go home every night and sit in front of a boring TV when you can have some proper speakers or a sound system with proper surround? Just enjoy life!"

And with that, it was time for me to stroll down the road to enjoy the AV delights of St Kilda's Astor Theatre cinema — not quite as modern or cutting-edge as the impressive space I was leaving, sure, but joyful all the same. **Becky Roberts**

esoterica

OZ GETS HIGH-TECH DEMO HAVEN

The Amplify AV Experience Centre in Melbourne is now open to the public

REVIEWED

DIGITAL ART

Supreme streaming DAC hails from Denmark

INPUT
MENU
STANDBY
SELECT
SD-025
MUTE

Vitus Audio SD-025 Mk.II

Streaming DAC

- Perfect sonics
- Superb build quality
- Roon-certified

- Dot-matrix display
- Fixed filtering
- Seemingly no manual

RRP **$48,000**

Take a long, hard look at Vitus Audio's SD-025 Mk.II streaming DAC and you would be hard-pressed to differentiate it from many other products of the Danish brand. The company's founder and head designer, Hans Ole Vitus, uses exactly the same chassis for many of his models, which not only ensures visual continuity for those wanting to use, say, an SD-025 Mk.II with one of his amplifiers but also makes the chassis less expensive to produce as he can order them in greater quantities. Indeed, when a chassis costs as much to build as the one Vitus Audio uses, we're talking about a not-inconsiderable saving.

When the very large and heavy (31kg!) carton containing my review sample arrived, I initially assumed someone had made a mistake and sent a Vitus Audio power amplifier instead. The SD-025 Mk.II's power supply must be massive because I needed some help to safely extricate the machine from its packaging and position it on my equipment rack.

The SD-025 apparently earns its 'Mk.II' status by incorporating a new streamer board that supports gigabit network streaming, but it isn't the only thing that's new: Vitus says that everything inside has been redesigned around the new board. You can choose any UPnP streaming software to play from whatever and wherever you like, or use one of the hardwire options if you, like me, prefer to source your audio locally.

DESIGN & BUILD

As with most Vitus Audio products, six push-buttons adorn the front panel, arranged vertically, with three on either side of the display. The buttons to the display's left are 'Input', 'Menu' and 'Standby'. You can switch between USB, optical, AES/EBU and S/PDIF inputs, plus Ethernet and wi-fi. (Wi-fi connectivity is provided by plugging the supplied 'Dual Band USB Adaptor AC1300Mbps' dongle into the rear-panel USB-A socket. I think this dongle approach is far superior to having wi-fi integrated because if a repair or upgrade becomes necessary, it can easily be done by the user simply replacing the dongle rather than having to go to a service centre.)

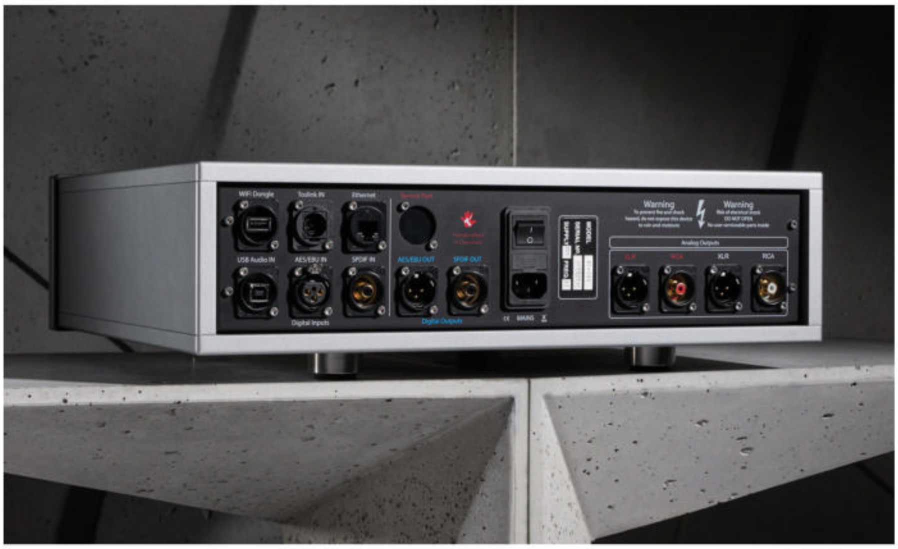
These buttons also select which of two analogue outputs you wish to use — the balanced XLR or unbalanced RCA. You also have AES/EBU and S/PDIF outputs onboard, but I couldn't figure out how to select them because no manual is supplied with the SD-025 Mk.II — or if there is one, I couldn't find it.

You see, like many manufacturers these days, Vitus Audio provides consumer information on a USB stick (in the case of the SD-025 Mk.II, it is a very handsome stick!) However, upon browsing the stick (the root directory is titled 'User Manuals and Brochures'), I discovered that it's a bulk repository for *all* of Vitus Audio's product information, with directories for the Masterpiece, Reference and Signature Series components, plus one containing all the USB drivers required across the three series. Opening the 'Signature' subdirectory revealed deeper subdirectories for 19 different Signature Series models, but not one for the SD-025 Mk.II. There *was* one titled 'SD-025', but it did not contain a manual, just two files titled 'SD-Remote explanation.pdf' and 'SD-025 Streamer Guide.pdf'. Hmm.

Although I worked out most of the menu functions intuitively, exiting it using the front-panel controls wasn't easy. When the menu screen reads 'Exit' (with an accompanying arrow presumably pointing in the direction you should go), none of the three buttons seemed to complete the process. This information is, presumably, in the missing manual! (I didn't ask Vitus Audio to supply one because I shouldn't have to: it's not as if the SD-025Mk.II is a new product, having been introduced three High End Munich shows ago!)

The buttons on the right of the display are 'Volume Up', 'Volume Down' and 'Mute'. The maximum volume is shown as '0.00dB', the minimum as '–60.0dB'. Adjustment between these two extremes occurs in 0.5dB increments.

A fairly bright 'VA' logo at the bottom of the front panel illuminates all the time, even when the unit is in standby mode. And the display colour is a rather nice orange



(on a black background). I didn't much like the display's old-fashioned dot-matrix design, though — not least as very tiny dots create the matrix. It's also not very bright, making it quite difficult to read for those with imperfect eyesight. It appears the brightness is adjustable via Vitus Audio's optional remote control, but one was not supplied with my review sample.

Brightness may even be adjustable using the front-panel controls, but without a manual I just couldn't be sure. From the information on the USB stick, it appears that this remote is an OEM design, with only some of the controls able to control SD-025 Mk.II functions, including volume adjustment, mute, input selection, power on/standby and display brightness.

The digital inputs accommodate digital data across a wide gamut of formats, courtesy of a pair of 1955 multibit delta-sigma DACs made by Analog Devices in combination with an Engineered Q8 sample rate converter — we're talking USB-Type B up to 24-bit/384kHz and DSD128; AES/EBU and S/PDIF up to 24-bit/192kHz; optical up to 24-bit/96kHz; and Ethernet up to 24-bit/192kHz and DSD64. The digital outputs, meanwhile, are fixed at 24-bit/192kHz.

> It was obvious from the get-go that I would have to dip deeply into my bucket of superlatives here...

The SD-025 Mk.II supports Mconnect, UPNP/DLNA, Tidal Connect, Spotify Connect, V-Tuner and Qobuz, amongst others. It is now also certified as a Roon Ready endpoint, although Roon is not built in — you still need a separate Roon Core to manage your music collection and stream audio to the DAC. Your Vitus Audio retailer will be able to help with the specifics.

I would call the SD-025 Mk.II a 'take it or leave it' kind of DAC because nothing at all is adjustable — you can't switch between different digital filters, adjust oversampling rates, invert phase, and so on. Basically, what you see is what you get. Although I don't often fiddle much with such variables available on DACs, I rather like having the option to do so.

As I love handwritten inventory cards and warranty forms, I was naturally enamoured with the ones supplied with my sample, which were hand-penned by one Britta Mogensen, who assured me that everything was A-OK with the product and that all the accessories required had been included with it. (Hey Britta, what about a manual?!) Vitus Audio's written warranty has some interesting provisions, such as that the initial two-year purchase warranty (only valid if you purchase from an 'Authorised Partner') can be extended to six years by registering your purchase with Vitus Audio within 30 days, and that should you sell your SD-025 MkII, any period of time remaining on the warranty can be transferred to a new owner, providing the sale is arranged via an Authorised Partner.

I'm not sure how this would play out under Australian Consumer Law, which states that it isn't necessary to register an extended warranty in order to qualify for coverage, and doesn't mention second owners at all. But it's probably all moot anyway: due to how Vitus Audio builds its components, you are unlikely to ever make use of the SD-025 Mk.II's warranty.

Although my sample was finished in silver (officially 'Warm Silver'), the streaming DAC is also available in two other 'standard' colours — 'Pure White' and 'Jet Black' — while 'unique' finishes such as 'Titanium Orange', 'Dark Champagne' and 'Titanium Grey' (pictured above) can be specially ordered. Your dealer can explain the other available unique finishes, plus application lead times and pricing.

LISTENING SESSIONS

While the front-panel display and absence of a manual were sources of mild frustration, all that was immediately forgiven once I started listening. The streaming DAC's sound quality was clearly superior in every respect. It was obvious from the get-go that I would have to dip deeply into my bucket of superlatives here to aptly describe its performance.

If you want to be super impressed by the SD-025 Mk.II's bass delivery, spin up Lady Gaga's latest album, Mayhem, from the very beginning. Opener *Disease* is just wonderful, for the bass not only from a real bass guitar but also that delivered from the synthesisers, synth pads and even the drum machine.

But that is just a teaser for track two, which was peeled off as a hit single, the incredible and appropriately named *Abracadabra*. Ms Germanotta has really pulled one out of the hat with this pop masterpiece, a song so strong it forces listeners onto the dancefloor. The beat is hypnotic and the chorus is sing-along perfection. It also highlights Gaga's astonishing vocal range and her ability to inflect the tonality of her lyrics. The drumming (including real drums, as well as a machine) is machine-gun-like in its impact. The SD-025 Mk.II reveals all these details with total accuracy.

The following tracks don't reach the same heights, but don't bail before you've heard the closer, *Die With A Smile*, her collaboration with Bruno Mars, to admire not only his terrific tenor voice but also her pianism and, once again, vocal. The synergy of the duet is enchanting.

To hear how the Vitus Audio delivered sonic complexity, I turned to British Bahraini trumpeter Yazz Ahmed's fourth (and newest) album, A Paradise in the Hold. The music is essentially jazz improvisation inspired by her Arabic heritage in which quarter-tone scales play a significant part. Amongst the many sonic highlights are the sound of George Crowley's bass clarinet and Ralph Wyld's vibraphone, but the polyrhythms that infect almost all the tracks are like earworms to the soul… you can't *not* listen to the music. This is some of the most outrageously difficult music I've ever been privileged to hear, and the SD-025 Mk.II's delivery was as pitch-perfect and rhythmically accurate as the musicians themselves. The title track is probably the go-to, but *Her Light* and *Into the Night* are also unmissable, as is opener *She Stands on the Shore*. Note also that hand-claps are incredibly revealing of sound quality that's true to life, and you will hear plenty of these on *Paradise*.

To check high-frequency delivery and also to reprise female vocals, it was time for an album that to some may seem a strange choice, Arcadia from Alison Krauss and Union Station. Not strange so far as the female vocal is concerned, because Krauss has a gorgeous voice, but if you're wondering about treble quality, just listen to the sound of the dobro, fiddle, lap steel and mandolin, all of which are beautifully recorded. The acoustic guitar, banjo and piano also stretch into the upper reaches. Plus, there's the lovely baritone of Russell Moore. It's a strange album choice for me also due to its country and bluegrass genre, but I was initially intrigued by the album's title being the same as that of my all-time favourite play, written by Tom Stoppard.

CONCLUSION

Forgive its quirks and the Vitus Audio SD-025 Mk.II is a superb streaming DAC, performing at the highest calibre. If you are in the market for a component of this quality, you should certainly add it to your 'must audition' list. ***Greg Borrowman***

SPECS & CONTACT

Warranty: 2 years (extendable to 6)
Outputs: RCA, balanced XLR, AES/EBU, S/PDIF
Inputs: USB Type B, optical, S/PDIF, AES/EBU, RJ45
Impedance: 80Ω (XLR, RCA)
Frequency response: +800kHz
Signal-to-noise ratio: > 110dB @ 1kHz
THD: < 0.01%
File support: up to 24-bit/384kHz PCM, DSD128 (USB)
Power consumption: <1W (standby), 20W (operation)
Dimensions (HWD):13.5 x 43.5 x 42.8cm
Weight: 26kg

Distributor: Absolute Hi End
T: (04) 8877 7999
E: info@absolutehiend.com
W: www.absolutehiend.com

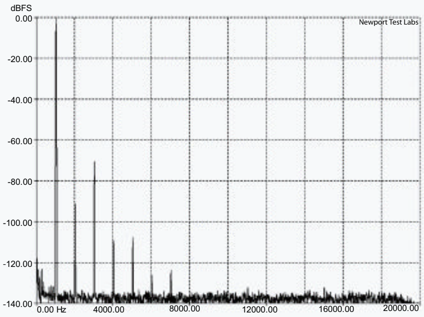
Readers interested in a full technical appraisal of the performance of the Vitus Audio SD-025 Mk.II streaming DAC should continue on and read the **LABORATORY REPORT** published on the following pages. Readers should note that the results mentioned in the report, tabulated in performance charts and/or displayed using graphs and/or photographs should be construed as applying only to the specific sample tested.

Laboratory Test Report

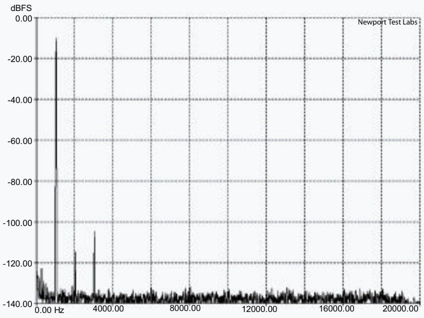
Newport Test Labs measured the output voltage of the streaming DAC's balanced outputs at 4.0133 and 4.0445 volts for the left and right channels respectively, putting channel balance at an excellent 0.065dB, as you can see from the tabulated results on p.67. Obviously, the voltages of the unbalanced outputs (not tested) would come in at exactly half these levels, around 2 volts.

Channel separation was generally excellent, being 124dB at 16Hz, 131dB at 1kHz and still 110dB at 20kHz. These figures were returned using 16-bit/44.1kHz test signals, with only the test signal being measured. Channel separation diminished when separation was measured in the presence of an external signal, as per the AES17 (48-bit/48kHz) standard, but it was still better than 90dB for frequencies below 3kHz and around 85dB for frequencies between 3kHz and 20kHz.

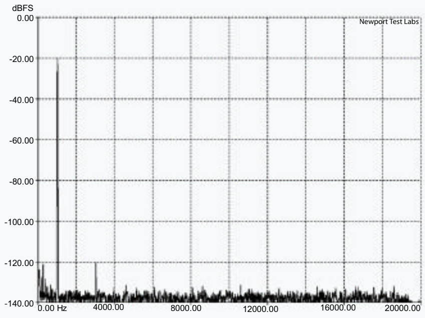
Graph 1 below shows distortion for a 1kHz signal at 0dB (16-bit/44.1kHz), and you can see a second harmonic at –91dB (0.0028%), a third at –70dB (0.0316%), fourth and fifth harmonics at around –108dB (0.0003%), and fifth and sixth harmonics at around –125dB (0.00005%). These all appeared to be related to the analogue output stage rather than the digital-to-analogue converter, as with a recorded signal at –10dB, only two distortion components are visible — a second harmonic at –115dB (0.0001%) and a third at –105dB



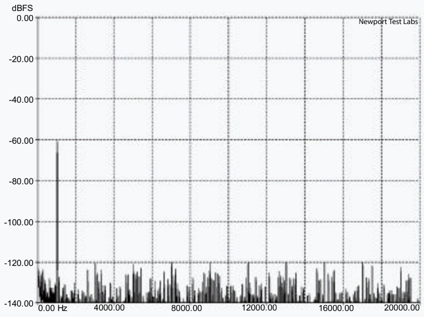
Graph 1. THD + N with 1kHz test signal 0dB recorded level, 16-bit/44.1kHz (Red Book)



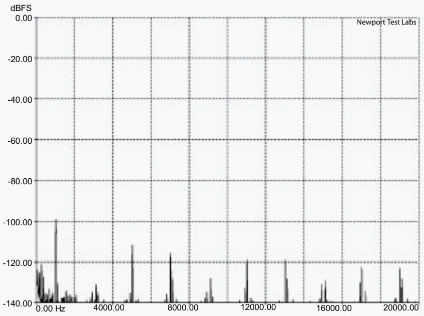
Graph 2. THD + N with 1kHz test signal -10dB recorded level, 16-bit/44.1kHz (Red Book)



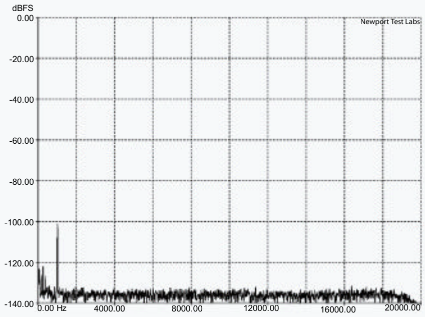
Graph 3. THD + N with 1kHz test signal -20dB recorded level, 16-bit/44.1kHz (Red Book)



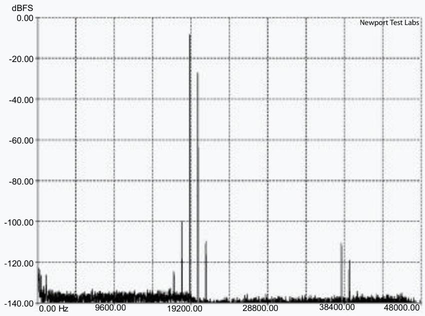
Graph 4. THD + N with 1kHz test signal -60dB recorded level, 16-bit/44.1kHz (Red Book). No dither



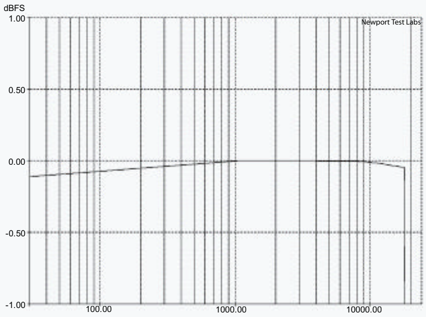
Graph 5. THD + N with 1kHz test signal -90dB recorded level, 16-bit/44.1kHz (Red Book). No dither



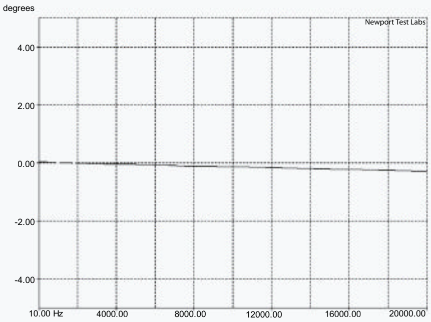
Graph 6. THD + N with 1kHz test signal -90dB recorded level, 16-bit/44.1kHz (Red Book). Dithered.



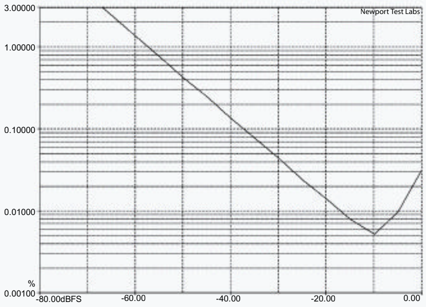
Graph 7. IMD + N with 19/20kHz test signal at 0dB recorded level, 16-bit/44.1kHz (Red Book)



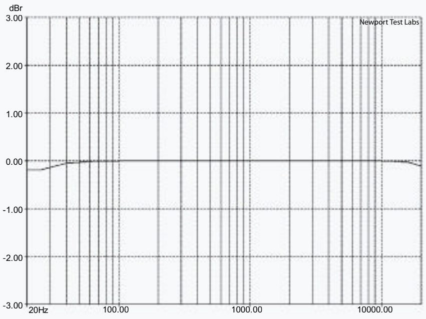
Graph 8. Frequency response at 0dB recorded level, 16-bit/44.1kHz (Red Book)



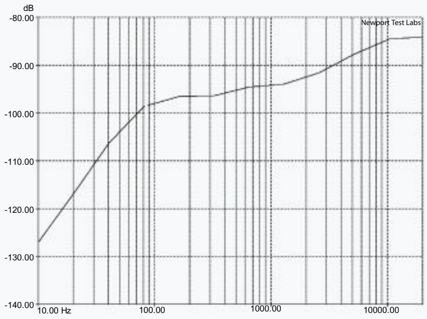
Graph 9. Interchannel phase response using 24-bit/48kHz test signal (AES17)



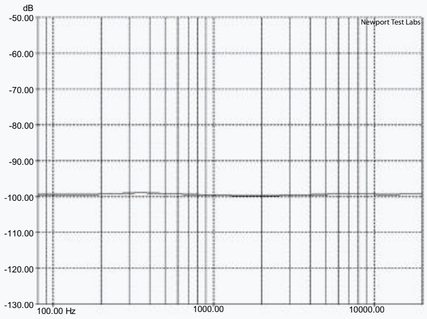
Graph 10. THD vs Level using 24-bit/48kHz test signal (AES17)



Graph 12. Frequency response using 24-bit/48kHz test signal (AES17)



Graph 13. Channel separation in the presence using 24-bit/48kHz test signal (AES17)



Graph 14. DAC jitter susceptibility using 24-bit/48kHz test signal (AES17)

Frequency response was essentially ruler-flat, down only around 0.1dB at 20Hz and 20kHz

(0.0005%), as you can see on Graph 2.

With a –20dB signal (Graph 3), you can see only a single harmonically related distortion component in the output, at –120dB (0.0001%), as well as some mains-related noise to the left of the signal, all of which is more than 120dB down, where it would be completely inaudible.

Graph 5 shows distortion at –90dB with an undithered test signal, which results in spurious output from the digital-to-analogue conversion process, which is why all music signals are dithered. You then get a result like the one shown in Graph 6, which shows the same 1kHz test signal at the same level but with dither added. You can see the converter artefacts have disappeared completely, so there is no harmonically related distortion in the SD-025 Mk.II's output at all, and the overall

noise floor across the audio band is down close to –140dB.

Readers should note that a 'noise floor' is not the same as a 'signal-to-noise ratio', and *Newport Test Labs* measured the latter as 113dB unweighted and 118dB A-weighted using 16-bit/44.1kHz test signals. Using the AES17 standard, which uses a different standard and different weighting technique, the lab measured 105dB (CCIR).

Intermodulation distortion was very low, as you can see from Graph 7, with the 18kHz sideband at –100dB (0.001%) and the 21kHz sideband at –110dB (0.0003%). The other intermodulation and sampling frequency-related signals visible on the graph are all too high in frequency and too low in level to be audible.

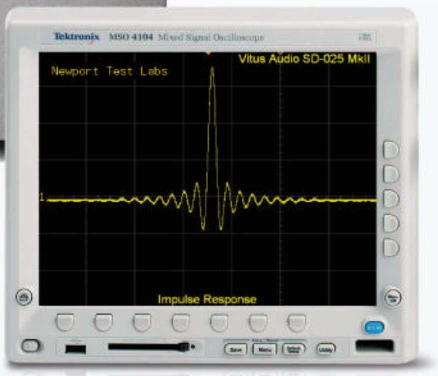
As you would expect, the SD-025 Mk.II's frequency response was essentially ruler-flat, down only around 0.1dB at 20Hz and 20kHz, though the expanded vertical scale of Graph 8 belies the ruler-flat analogy. You can see that the high-frequency cut-off is extremely steep. Response with an AES17 (24-bit/48kHz) is shown in Graph 12 and, because of the different vertical scaling, is much more like ruler-flat.

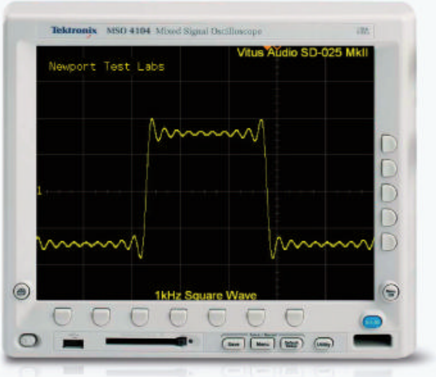
Interchannel phase is extremely accurate at low frequencies (0.03 degrees at 16Hz) and still a very good 0.28 degrees at 20kHz, as you can see in Graph 9.

The oscillograms showing the SD-025 Mk.II's square wave and impulse responses show that Vitus Audio uses a very standard conventional oversampling filter and that signal polarity is as it should be (normal rather than inverted).

Standby power consumption was measured as 3.25 watts, which is higher than the 'less than 1-watt' claimed by Vitus, albeit low enough that you needn't bother turning off the SD-025 Mk.II when it's not in use. Switching to standby mode will be fine — at least it will be unless you're going away for some time, in which case I would recommend turning it off (and also unplugging it) at the 240V power point.

Steve Holding





Vitus Audio SD-025Mk.II — Test Results (16-bit/44.1kHz)

Analogue Section	Result	Units/Comment
Output Voltage (Balanced outputs)	4.0133 / 4.0445	volts (Left Ch/ Right Ch)
Frequency Response	See Graphs	
Channel Separation	124 / 131 / 110	dB at 16Hz / 1kHz / 20kHz
THD+N	0.027%	@ 1kHz @ 0dBFS
Channel Balance	0.064dB	@ 1kHz @ 0dBFS
Channel Phase	0.03 / 0.02 / 0.28	degrees at 16Hz / 1kHz / 20kHz
Group Delay	8.47 / 5.66	degrees (1–20kHz / 20–1kHz)
Signal-to-Noise Ratio (No Pre-emph)	113dB / 118dB	dB (unweighted/weighted)
De-Emphasis Error	N/A	at 1kHz / 4kHz / 16kHz
Linearity Error @ –60.00dB / –70.00dB	0.02 / 0.05	dB (Test Signal Not Dithered)
Linearity Error @ –80.59dB / –85.24dB	0.03 / 0.01	dB (Test Signal Not Dithered)
Linearity Error @ –89.46dB / –91.24dB	0.09 / 0.03	dB (Test Signal Not Dithered)
Linearity Error @ –80.70dB / –90.31dB	0.08 / 0.05	dB (Test Signal Dithered)
Power Consumption	3.25 / 40.52	watts (Standby / On)
Mains Voltage During Testing	243 – 246	(Minimum – Maximum)

Vitus Audio SD-025Mk.II — Test Results (24-bit/48kHz)

Digital Section	Result	Units/Comment
Out of Band Spurious Components	–106.318	dBFS
Suppression of Imaging Components	–100.778	dBFS
Level Dependent Logarithmic Gain	NT	
Intermodulation Distortion (1)	–72.651	18kHz/20kHz 1:1 Ratio
Intermodulation Distortion (2)	–73.713	41Hz/7993Hz 4:1 Ratio
Low Level Noise Modulation	15.127	Worst Case
Idle Channel Noise	–104.77	CCIR-RMS weighting
Signal-to-Noise Ratio	–105.316	CCIR-RMS weighting
Power Line Products	–121.289	50Hz
Non-Linear Interchannel Crosstalk (a)	–117.608	3kHz (2nd-order ref 17kHz/20kHz)
Non-Linear Interchannel Crosstalk (b)	–118.067	6kHz (3rd-order ref 17kHz/20kHz)
Non-Linear Interchannel Crosstalk (c)	–98.96	10.040kHz (2nd re 40Hz/10kHz)
Non-Linear Interchannel Crosstalk (d)	–103.29	10.080kHz (3rd re 40Hz/10kHz)
Absolute Phase	Non-Inverting	Normal/Inverted

185-inch screen, 19-channel sound, $500k system… and that's just in one of *three* cinema rooms!

Step inside Audio Active's all-new Amplify AV Experience Centre in Port Melbourne

"It's the sensory and emotional experience that matters in music and movies; it's not just about the tech specs," said Jeremy Bouris, founder and Managing Director of Audio Active Australia, at the launch of the distributor's brand-new audiovisual demo-space-cum-experience-centre. However, when one of three (!) cinemas in that space has roughly $500,000 worth of equipment in it alone, it's only natural to throw some specifics and specifications around — particularly when they include Sony's reference VPL-GTZ380 laser projector beaming onto a 185-inch screen, a 9.4.6-channel Pro Audio Technology surround system with 19,000 watts of firepower behind it, and 12 luxury leather seats that have more buttons and boujiness than those in Village Cinema's Gold Class.

AMPLIFY
AUDIO VISUAL
SONY

In front of a sea of eager guests, Bouris and his wife Melanie understandably bigged-up the new reference cinema room at the evening opening of the Amplify AV Experience Centre last month, before the red rope barrier across the bottom of the staircase leading up to it had been dropped. And when the time came to drop the rope and let the demos begin, the not-so-humble brag proved more than justified. But first, some context…

FOR CUSTOMERS AND DEALERS ALIKE

The Amplify AV Experience Centre is the result of a six-month renovation of Audio Active's Port Melbourne residence and was designed to be an extension of its national retailers' partners whilst providing inspiration and hands-on experiences to integrators, dealers and consumers alike.

"The Amplify branding allows us to speak directly to discerning end-users who want to experience the very best in audiovisual performance," said an Audio Active spokesperson.

"This is our first experience centre to bring suppliers and dealers together," added Melanie. "To work with installers, designers and builders, and to provide training, technical support and brand awareness to empower our partners, as well as allow consumers to experience our products."

To that end, the two-storey space comprises three cinema rooms, two of which are more modest than the aforementioned reference one, although barely — I'm still talking 130 to 155-inch screens lit up by high-end Sony projectors, nine to 15 channels of audio delivered by Theory Audio Design, StormAudio and Anthem kit, and leather recliners which

> Audio Active's established two-channel portfolio includes Martin Logan, Paradigm and Luxman

come courtesy of Audio Active's own new DTX brand. (Of course, only now, looking at the trio of armchair models available online, am I kicking myself for not trying out the one with heat and massage technology… $3,499 each if you were wondering.)

There's also a hi-fi room and an open-plan TV-centric lounge (not forgetting a meeting room and kitchen too) for entertaining and educating visitors on products from Audio Active's established two-channel portfolio, which includes Martin Logan, Paradigm and Luxman, plus TVs from Sony. Indeed, it was quite a welcome sight being greeted by a Luxman L507Z integrated flanked by Paradigm Founder 100F floorstanders as I walked through the centre's glass doors, only beaten, in fact, by the presence of Luxman's vacuum tube MQ-300 amplifier and D-380 CD player on display to the side.

Paradigm and MartinLogan have partnered with Audio Active since Bouris started the distribution company 15 years ago, after leaving his finance executive position at JB Hi-Fi (formerly owned by his father, Richard. During the launch, Bouris thanked his father for "sharing his lifelong passion, which has now become my lifelong passion too".) That Audio Active has also partnered with Sony for more than a decade, too, tells you all you need to know about the company's expertise in and knowledge of its selection of brands.

Melanie and Jeremy Bouris at the venue launch: "It's the sensory and emotional experience that matters…"

FIRST-CLASS MOVIE PLAYERS & PLATFORM ARRIVE DOWN UNDER

In addition to established partners comes a new one for Audio Active: Kaleidescape, which the distributor is bringing to Australian audiences for the first time.

The world's only digital movie provider with lossless audio and full reference video quality will launch the Kaleidescape movie store here, offering a comprehensive catalogue of 4K and HD movie, TV and concert titles from major studios.

Australian customers will also have access to Kaleidescape's extensive device lineup, including the Strato V, Strato C and Strato M movie players and Terra Prime servers (12TB, 24TB, and 48TB).

While I'm yet to properly experience the digital movie player and platform myself, my colleagues, who reviewed it for *What Hi-Fi?* and the latest issue of *Audio Esoterica* magazine, praised it for combining "most of the quality of 4K Blu-ray with much of the convenience of streaming, making it seriously worthy of consideration if you've got very deep pockets and an equally deep dedication to home cinema… for those with the funds for a superior movie playback system, there's very little to prevent our full recommendation of Kaleidescape to those

Lights
CINEMA-1 FOUNDER
All Lights
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CRESTRON

wishing to install a high-capacity Terra Prime server and multiple Strato Vs, Cs and Ms around your home. In fact, we'll be extremely jealous."

OVERKILL? PROBABLY. OVERDONE? NOT ONE BIT

So, armed with a filled champagne flute and cup of popcorn, let me return to that reference, no-expense-spared cinema room. For most of us peasants, such a home cinema setup is unobtainable... overkill even. I have fewer chairs in my entire home, and rarely does a domestic movie space compare in terms of screen sizes and audio wattage. But it serves a purpose for those who are fortunate enough to splurge on their movie passion, whether to that extent or somewhere below it. (I expect many potential customers will sample at least two of the centre's cinema rooms during their visit for comparison.)

> There was impressive rumble, oh yes — just not the distracting kind that overshadows everything else

Somewhat making up for my lack of domestic space and disposable income have been the several opportunities I've had in my 13 years as a hi-fi journalist to experience similarly high-calibre AV outfits, and believe me when I say that despite the calibre of the kit often showcased within them, many spaces can easily sound overcooked. Not this one, however.

During the demo, myself and eleven fellow guests squidged down into the comfy DTX chairs and watched movie snippets from *No Time To Die* (Italy car chase scene), *Top Gun: Maverick* (mission test run scene) and *A Star is Born* (*Always Remember Us This Way* scene). That's 15 minutes of high-octane stuff that translates to a fast-moving picture and a bass-dominating score, ending with a few minutes of a 'live concert' performance. While, in my experience, many demo spaces tend to fall into the trap of turning up the subs to 'wow', armchair-gripping levels — akin to turning up a retail store TV to max brightness to dazzle bystanders — the reference Amplify AV cinema room produced one of the most authentic and least 'showy' renditions of its type that I've come across. The system was exceptionally well set up and calibrated, even if a couple of sound/picture syncing stutters took place during the dem (which was probably software related).

Don't get me wrong, there was plenty to 'wow' — the pinpoint precision of the rapid gunfire sound in the Bond movie and the aeroplane overhead audio effects in the latest *Top Gun* sounded spot-on. There was impressive rumble, oh yes — just not the distracting kind that overshadows everything else in the mix. I've seen many a native 4K Sony laser projector strut its stuff over the years, and with these kind of action scenes it won't take you longer than a minute to understand why they are so critically acclaimed, too.

When Lady Gaga's vocal and piano filled the speakers, the centre and front channels were able to shine while the crowd subtly but effectively filled the surrounds.

As a room in which to see and hear what's possible at such state-of-the-art level, it succeeds. I left impressed, and keen to try out the other rooms. And that's every bit the positive impression the Amplify AV Experience Centre could have hoped to make that evening.

Not a bad way to celebrate a 15th anniversary, Audio Active, eh!

The Amplify AV Experience Centre opened to the public on the 20th May and operates under the newly established Amplify Audio Visual brand. For more information, visit **amplifyav.com.au**

BILLY IDOL
DREAM INTO IT

Billy Idol

Dream Into It

DARK HORSE

As he nears the ripe old age of 70, Billy Idol is in a reflective mood on his first album in more than a decade. It's drenched in glue-sniffing, safety-pinned punk nostalgia, alongside a strong dose of self-reflection, as he takes a look back at the good, the bad and the ugly sides of his life. With the decades and physical distance stretching out behind him from his Californian home, Dream Into It — both the woozy pop-rock title track and the album as a whole — evokes the ghosts of London's King's Road, the violence and the thrills of the initial punk scene that made him, the dirty squats, the street fights and the DIY creativity that shaped a young man who was full of ambition (and drugs) and empty of belly. It's all oddly moving, even in the higher-energy moments such as *Too Much Fun*, a wry, unexpectedly joyful portrait of his boozehound years.

A trio of duets are tailor-made for each collaborator picked to spice things up. Avril Lavigne bounces in for the fizzy pop-punk romp of *77*, which may, again, be a dewy-eyed look back at the original punk explosion, but musically could have burst straight from the Paramore cannon. The dreamy, country-tinged *John Wayne* suits the laid-back cool of Alison Mosshart of The Kills to a tee. And *Wildside* is a subdued, sad and self-flagellating confessional in which Idol and Joan Jett hold each other up under the weight of their shared demons.

Regrets, he's certainly had a few, and that theme of being a messy drunk and an unreliable friend and partner is a thread that runs through the whole thing. Thematically it's a steady path, although musically Dream Into It is fairly erratic and offers quite a disjointed listening experience as it jumps from style to style. So it's telling that closing track *I'm Still Dancing* is the most obviously Billy Idol song of the bunch — it's basically *Rebel Yell* reborn. This angry young man has reached his dotage, and Dream Into It serves as a lifetime of memories collected for future generations.

TURIN BRAKES
SPACEHOPPER

Turin Brakes

Spacehopper

COOKING VINYL

Whatever happened to Turin Brakes? Once dubbed the darlings of the so-called New Acoustic Movement in the early noughties, they were harshly cast aside once The Strokes and The Libertines came along. After 2003's Ether Song saw the South London band peak in the album charts, they were pretty much forgotten about both critically and commercially. Rather than jack it all in, though, they soldiered on and continued to release consistently confident records. Their tenth studio album sees the band reflecting on their early beginnings through wiser eyes, particularly on soaring opener *The Message* and the jangly title track. These familiar moments work well, but it's the darker, spikier songs that are perhaps the most ear-catching, especially the guitar-scratching *Pays To Be Paranoid*, a scathing indictment of the digital world we live in, and psych-drenched closer *What's Underneath*. Sure, they're guilty of peddling the odd pedestrian number, but there's nothing on here that warrants kicking them to the kerb.

VALENCIA
CLUB

Cardinal Black

Midnight At The Valencia

THIRTY TIGERS

Cardinal Black are one of those bands that sound like they've been around forever, and that feeling of familiarity is testament to the accomplished songwriting on their second album. Key to this is the warm, ethereal and intimate atmosphere of the tracks, with guitarist Chris Buck displaying terrific poise and vocalist Tom Hollister delivering some superbly soulful, honeyed vocals. Combined with some heartfelt lyrics, his voice conjures up an irresistible sense of cinematic, misty-eyed introspection and nostalgia. *Breathe*, *Racing Cars*, *Push/Pull* and *Adeline* are driven by pure emotion. Sultry and immersive, they draw you into deeply humane personal narratives. *Keep On Running*'s swamp-blues stalker tale gives the album a disturbing central twist, the antidote being immense album closer *Your Spark (Blows Me To Pieces)*, a slow-build soaring love song with an epic guitar solo. With talent like this, Cardinal Black really should go global.

BERNIE MARSDEN
icons

Bernie Marsden

Icons

CONQUEST MUSIC

The fourth album of five in the now sadly departed guitarist Bernie Marsden's Inspirations series comprises his devoted covers of songs by some of his rock heroes, including a sparkling reimagining of Hendrix's *Purple Haze*. It opens, in homage to Peter Green, with *Shake Your Money Maker*, the Elmore James song made famous by blues-years Fleetwood Mac, and also includes *Green's Man Of The World*, as well as *Like It This Way*, a Danny Kirwan song from Mac's 1969 Chicago sessions album. The choice of that illustrates Marsden's appreciation of deep cuts, underlined by a brilliant version of Rory Gallagher's *Wheels Within Wheels* and his take on Derek and the Dominos' *Bell Bottom Blues*. Two bonus originals — the instrumentals *Kestrel* and *Barford Blues* — show just how much Marsden learned from the masters named above and others, and his Midas touch is confirmed on all 12 tracks.

SUZANNE VEGA
FLYING WITH ANGELS

Suzanne Vega

Flying With Angels

COOKING VINYL

Wise and adventurous in equal measure, Suzanne Vega has been rather quiet of late, partly as a result of caring for Paul Mills, her lawyer/poet husband, who suffered a stroke in 2023 that left him having to relearn how to speak. She explains the situation in the angry *Witch*, which is far from the only moment of fury, and Vega hasn't clattered like this since 1992's 99.9F°, whether it's railing against the misuse of free speech on *Speakers' Corner* or on the garage-punk of *Rats*, where actual rats attack someone's Prius. Elsewhere, she channels Love Hangover-era Diana Ross on *Love Thief*, reinvents Bob Dylan's *I Want You* as *Chambermaid* (i.e. the chambermaid mentioned in the song), pays slinky tribute to Lucinda Williams on *Lucinda* ('I love her cos she's blunt and humble'), and worries about God's reaction to the Ukraine war on the ominous *Last Train From Mariupol*. Vega's on fire.

PINK FLOYD AT POMPEII
MCMLXXII

Pink Floyd

Pink Floyd At Pompeii — MCMLXXII

LEGACY RECORDINGS

Back in the days when God was a boy and bath nights were as much a weekly treat as they were a necessity, the local flea-pit cinema would occasionally open its doors late to deviate from its scheduled programming to indulge in all-night horror marathons, cult movies or concert films, catering for those whose tastes and interests ran counter to the mainstream. It may seem rather quaint now in a time of information overload, instant-access entertainment and short attention spans, but for those who made the effort to rock up with smuggled beers, a packet of 10 fags and perhaps something more exotic, these encounters with the counterculture were as meaningfully informative and impactful as they were fun.

Ergo Pink Floyd: Live At Pompeii, which showed the generation that latched on to music in the 1970s and 80s that there was so much more to the band than the imperial period that ran from the release of 1973's The Dark Side Of The Moon to the final brick that built The Wall six years later. Filmed and recorded live over several days in October 1971 in the ruins of Pompeii's Roman amphitheatre with only the camera crew as the audience, these performances show a band in transition as they begin to find their direction and identity following the enforced departure of founder member Syd Barrett after his drug-induced meltdown.

With one foot in the band's psychedelic past and the other pointing at the future, the updated and retitled Pink Floyd At Pompeii — MCMLXXII is a vital historical snapshot. Earlier material, such as *Set The Controls For The Heart Of The Sun* and *Careful With That Axe, Eugene,* are less concerned with the discipline of song structure — or indeed songcraft — as they are with creating music that enhances altered states of consciousness via the exploitation of sound effects and guitar pedals. Looking forward with the then-contemporary dips into Meddle via *One Of These Days* and the monumental *Echoes* (here split into two parts), Pink Floyd take off from the more disciplined launch pads of melody and purpose.

Visually cleaned up, and remixed by Steven Wilson, Pink Floyd At Pompeii — MCMLXXII is liberated from memories of scratchy sound and grainy visuals. Crucially, as a document of four hungry musicians working in common cause and without later bells, whistles and recriminations, this stands as the band's best live album.

This is BUDDY GUY!

Buddy Guy

This Is Buddy Guy!

CRAFT/BLUESVILLE

Proper guitar god Guy wouldn't truly get his just desserts until 1991's marvellous *Damn Right, I've Got The Blues* kick-started the then 55-year-old's late-period renaissance. Before that, despite some great Chess label sides and several superb collaborations with Junior Wells, the best way to experience Guy's guitar mastery was live. And this live album captures him on a particularly good 1968 night in a small Californian club. Guy was no slouch in the vocals department, but right from opener *I Got My Eyes On You*, his Stratocaster stings like a particularly upset hornet. The band swings like Tarzan while Guy takes the face off every head in the room. The covers are perfectly chosen — Guy displays casual brilliance raining down frenzied phrases during Guitar Slim's *The Things That I Used To Do* — but the originals are where he really takes off. *You Were Wrong* is a masterclass, and *I Had A Dream Last Night* is astounding. It's little wonder he's worshipped the way he is.

phaedra
by tangerine dream

Tangerine Dream

Phaedra 50th Anniversary Edition

UMR

The fifth album from the German synth-fondling pioneers was their first to be sequencer-driven, a landmark in the genre and a surprise commercial hit. Electronica is now ubiquitous and, like it or not, the dominant musical style of our times. Back in 1974, this mantra-like wash of often improvised analogue bleeps and feints blew minds and increased Rizla sales. Today, the hallowed title track sounds very odd and somewhat ominous, as if it might hypnotise the listener into an altered state that could conceivably be fun, but more likely frightening. This sumptuous six-disc box set includes a remaster, Steven Wilson's 5:1 Surround Sound mix (which gives this spectral haunting a slightly more red-blooded feel), and two discs of original-session out-takes. Much of this has appeared before, but the June 1974 concert from their first UK show is a beguiling display of maverick meddling with the fabric of sound. As with most of Tangerine Dream's music, it's superior.

DINOSAUR JR
Without a Sound

Dinosaur Jr

Without A Sound

CHERRY RED

The year is 1994, and main man J Mascis is sounding weary. Well, even wearier than usual, which is going some. Opener *Feel The Pain* begins with the sound of a cork popping, but is anything but celebratory; jarring, mournful and never static, Mascis's vocals imbued with a sense of isolation. 'I feel the pain of everyone,' he wails, reflecting his sense of bereavement following the death of his father, before the coruscating guitar cuts in and singularly adds to the sense of gnawing desperation. Dinosaur Jr's sixth album is a strange beast. Recorded near-solo following drummer Murph's departure, with some assistance from long-term bassist Mike Johnson and Come singer Thalia Zedek, it was criticised at the time for being too much of a "vanity project" (*Rolling Stone*), centred as it is on Mascis's inertia and inability to cope with the world. Yet with the benefit of hindsight, Without A Sound is just as strong as Mascis's more fêted albums. The reissue comes as double vinyl or CD, with B-sides, previously unreleased mixes and a fierce live London set from 1994.

DIRE STRAITS
BROTHERS IN ARMS

Dire Straits

Brothers In Arms (40th Anniversary)

MERCURY

Revisiting their behemoth fifth album Brothers In Arms on this five-LP/three-CD reissue four decades on, its era-defining charms still exude the assured, enfolding warmth that first made it such a massive hit. *So Far Away* slips down like honeyed malt whisky, subtle and undemanding yet fundamentally satisfying; *Walk Of Life* still bristles with fairground honky-tonk vivacity; tranquil ballad *Why Worry* is rendered even more affecting with the 2022 Dolby Atmos mix enhancing its Mediterranean stillness. Much has grown rewardingly evocative. Jazz-bar torch song *Your Latest Trick*, and *Ride Across The River*. Key to the reissue's appeal, however, is the inclusion of a two-hour 1985 live show from San Antonio, pure manna for a fan base denied any whiff of a reunion. Here, the likes of *Ride* and *Sultans* are energised for the stage, *Tunnel Of Love* stretches out over 20 dense and driving minutes, and we can revel once more in Knopfler's acoustic refrain rising balletically from the back end of *Romeo And Juliet*'s chorus.

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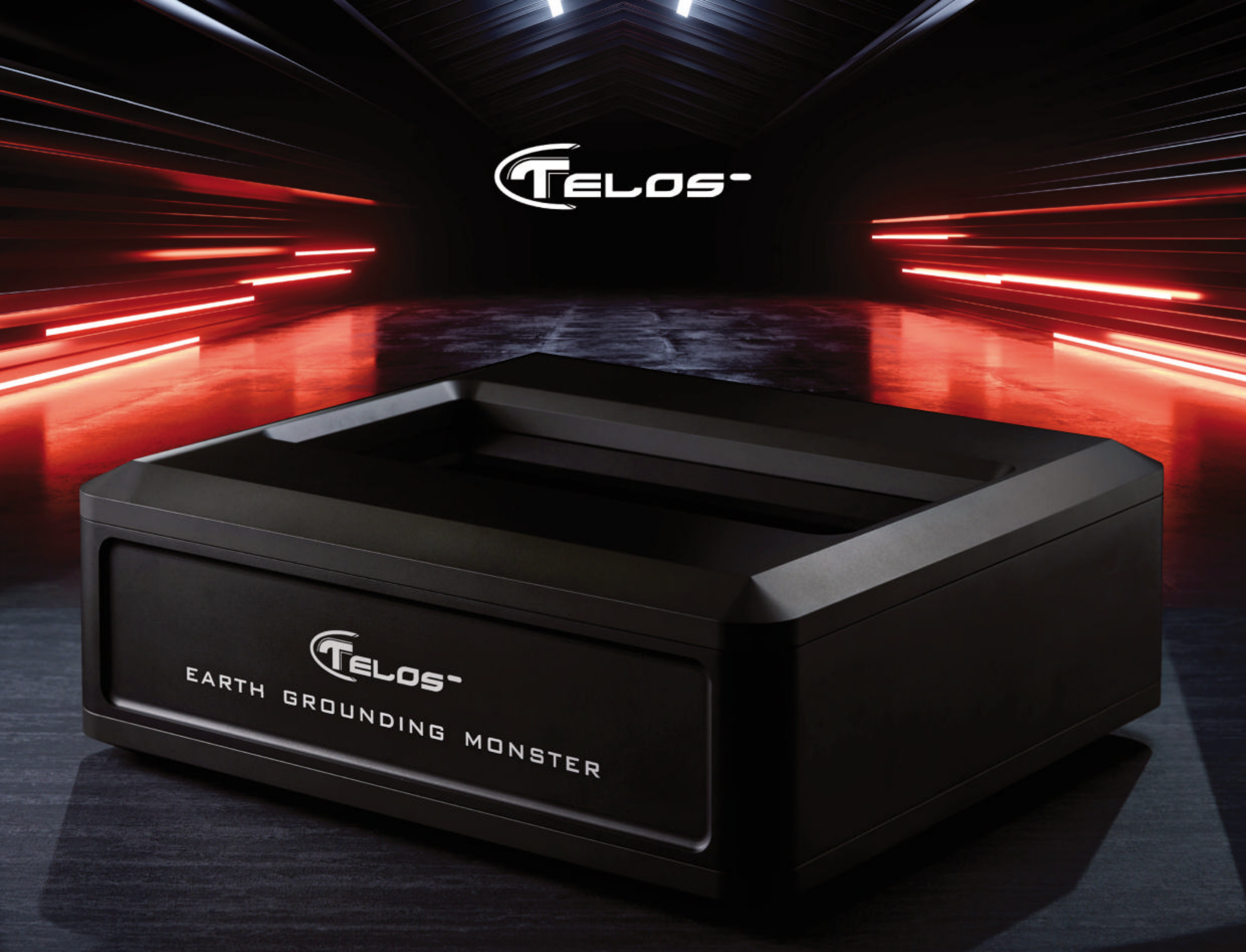

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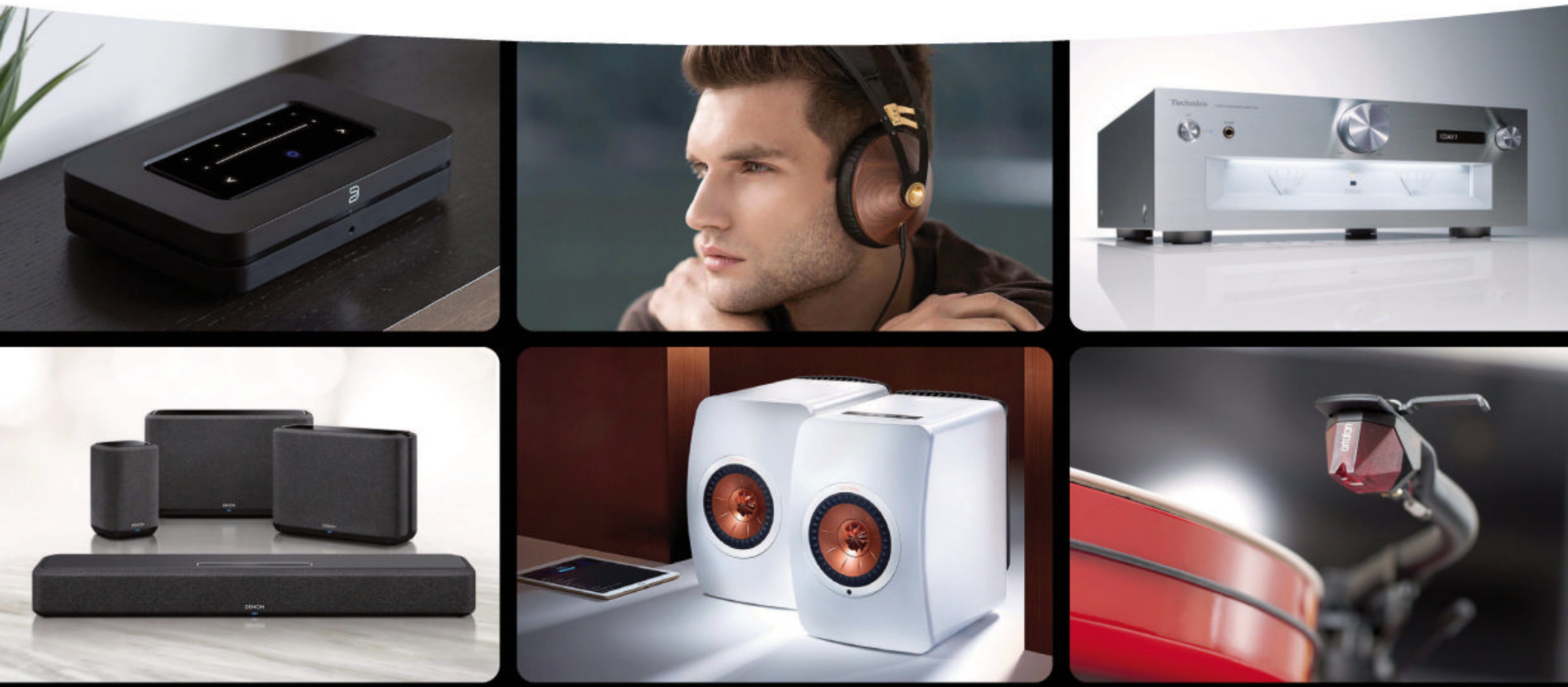

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7 EXQUISITE JAZZ TEST TRACKS

By Simon Lucas

Jazz is a divisive art form. For those who are partial, it's America's single largest contribution to 20th-century music and popular culture. For those less convinced, it can often sound like it's being made up on the spot — a textbook 'I could have done that' form of art. But regardless of whether or not you know your Basie from your Bird, there's no denying the hi-fi potency of a great jazz recording...

Billy Cobham
SPECTRUM

Billy Cobham

Stratus (1973)

Renowned drummer and notorious musical risk-taker Billy Cobham is, naturally, the engine room here — but the overall balance of *Stratus* is perfect for testing the way your system approaches a fiercely complicated recording. Drums, percussion, keyboards (acoustic and electric piano, plus Moog synthesizer), acoustic and electric bass, horns and wind instruments all take a turn — and when they're all chipping in simultaneously (as they do from 5:15) your system will need to demonstrate all its powers of resolution to keep this virtuoso fist-fight in check.

MONK'S DREAM
THE THELONIOUS MONK QUARTET

Thelonious Monk

Body and Soul (1963)

There's no mistaking a Monk recording — his utterly unique improvisational style is without peer. His work is at its most questioning when tackling a classic like this, where the combination of stabbing attack, unpredictable note releases and hesitations makes for fascinating (if not always the most relaxing) listening. This solo piano piece is alive with tiny details in its oddball key releases, periodic silences and glissandos — the attacks and decays are unique to Monk, but if your set-up can't dish the details he will end up sounding more like Les Dawson.

chick corea · return to forever

Chick Corea

Return to Forever (1972)

While *Return to Forever* is an ensemble piece, it's Corea's staggeringly lyrical electric piano playing that steals centre stage, and consequently (along with percussionist Flora Purim's wordless vocal interjections) the midrange. The remarkable discipline of Corea's playing means he sounds fluent and expressive even as each stab or caress of his keyboard is delivered squarely — so it follows your system needs to be able to deliver all the warmth and wit loaded into the midrange to hear him to best advantage. Plus it needs to put enough space around the keyboard sounds as they compete for space with voice, flute, drum kit and double-jointed bass.

Coltrane live at Birdland

John Coltrane

Alabama (1963)

On September 15th 1963, the Ku Klux Klan killed four African-American girls by bombing the 16th Street Baptist Church in Birmingham, Alabama. John Coltrane's lament/eulogy/rebuttal of the event is one of the most aching, resolute and indomitable pieces of music you will ever hear. And in terms of its impact, timing is everything — your system must describe the interplay between the musicians (and the horror that's all but audible in Coltrane's playing) to give the piece its full weight of import.

RAHSAAN ROLAND KIRK
BLACKNUSS

Rahsaan Roland Kirk

Blacknuss (1971)

Kirk was a test of dynamism all by himself — after all, not too many horn specialists routinely play three instruments at a time. And when surrounded by an extensive ensemble all gathered to celebrate the black notes of the keyboard, he becomes among the most frantic examinations of your system's dynamic ability you'll hear. *Blacknuss* starts quietly, gets louder, gets louder still, and then fluctuates between those states for as long as it feels like it. Can your system keep up? No? Time to start auditioning new components.

PHAROAH SANDERS
thembi

Pharoah Sanders

Astral Traveling (1987)

It's one thing to establish a soundstage of guitar/bass/drums/voice and have your system describe it convincingly. It's quite another to populate your stage with koto flute, balaphone, saxophone, finger cymbals, alto flute and cow horn (along with all the more usual jazz ensemble instruments) and assume your set-up will be able to make sense of it. If *Astral Traveling* is to sit believably between your speakers, your system will have to make each gentle, undemonstrative element co-exist harmoniously — after all, what's worse than your claves impacting on your violin?

THE BEST OF MOSE ALLISON

Mose Allison

Everybody Cryin' Mercy (1968)

Where understatement and low-temperature swing are concerned, few performers percolated like Mose John Allison. His combination of blues and jazz was never more fully realised than on *Everybody Cryin' Mercy* — but as far as your electronics are concerned, it's all about the soft attacks and lengthy delays Allison puts on his piano (as well as the similarly laid-back approach of his drummer and bassist). Without proper description of the leading edge of notes — and indeed their lingering departure — a ton of the tune's sardonic humour is lost.

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